

BANGALORE METRO RAIL CORPORATION LIMITED



Driving Bangalore Ahead

**TENDER DOCUMENT
FOR**

**ANNUAL PREVENTIVE MAINTENANCE
CONTRACT FOR SIGNALLING
SYSTEMS INSTALLED IN REACH-5
STATIONS, HEBBAGODI DEPOT AND
OCC & BCC**

BANGALORE METRO RAIL CORPORATION - O&M

Tender No: BMRCL/O&M/SIG/PMC/02

VOLUME 1

QUALIFICATION CUM TECHNICAL PACKAGE

Dec 2024

**BANGALORE METRO RAIL CORPORATION LIMITED
O&M Wing, Baiyappanahalli Depot, Bangalore-560038
Karnataka, India**



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SECTION-I
NOTICE INVITING
TENDER (NIT)



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SECTION – I
(A) NOTICE INVITING TENDERS (NIT)

NIT No: BMRCL/O&M/SIG/PMC/02

Date: xx/xx/2024

1. Bangalore Metro Rail Corporation Ltd (BMRCL) invites Tenders (**Single stage – Two-cover System**) through Karnataka Public Procurement Portal (e-Procurement Portal) of e-Governance Department, Govt. of Karnataka (<https://kppp.karnataka.gov.in>) from eligible domestic Tenderers i.e., from service providers done signalling works in any Metro Railway/Indian Railway signalling systems for the works detailed in 'Key Details' of Section-I. Details of qualifying requirements are furnished in "Instruction to Tenderers", Section-II of Tender Documents.

<u>Tender No.</u>	<u>Name of work</u>	<u>Earnest Money Deposit (Rs.)</u>	<u>Tender processing fee (Rs.)</u>	<u>Period of Contract</u>
1	2	3	4	5
BMRCL/O&M/SIG/PMC/02	ANNUAL PREVENTIVE MAINTENANCE CONTRACT FOR SIGNALLING SYSTEMS INSTALLED IN REACH-5 STATIONS, HEBBAGODI DEPOT AND OCC & BCC	6,29,529/-	As fixed by e-procurement Cell, Govt. of Karnataka	05 Years

The brief Scope of the work is provided in Instructions to the Tenderers (ITT) and the detailed description of Work is provided in Employer's Requirement.

Only firm/s that/those is/are registered or incorporated in India is/are eligible to participate (or) Any Tenderer from a country, which shares a land border with India and to which the Govt. of India has not extended lines of credit or in which the Govt. of India is not engaged in development projects, will be eligible to bid in this Tender, only if the Tenderer is registered with the "Competent Authority", as defined in ITT clause 36.

2. **REGISTRATION:**

- Tenders required to enroll on the Karnataka Public Procurement Portal (<https://kppp.karnataka.gov.in/>) by clicking on the link "Tenderers Registration" on the Karnataka Public Procurement Portal and by paying requisite registration fee.
- As part of the enrolment process, the Tenderers will be required to choose a unique user name to assign a password for their accounts.
- Tenderers are advised to register their valid email addresses and mobile numbers as part of the registration process. These would be used for any communication with the Tenderer.
- Upon enrolment, the Tenderers will be required to register their valid Digital Signature Certificate (Only Class III Certificates with signing + encryption key usage) issued by any Certifying Authority recognized by CCA India.
- Only one (01) valid DSC should be registered by a Tenderer. Please note that the Tenderers are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.
- Tenderers should then login to the website through the secured log-in by entering their user ID/password and the password of the DSC / e-Token.
- The scanned copies of all original documents (as required) should be uploaded on portal in



PDF/JPG format.

- h) For any query regarding e-Procurement on the Karnataka Public Procurement Portal, contact helpdesk number: +91-80-46010000, +91-80-68948777, and Email ID: support@eprochelpdesk.com.

3. SEARCHING FOR TENDERS/BIDS:

Once the Tenderers have selected the proposal Bids/Tenders and if they are interested to participate, the Tenderers can pay non-refundable processing fee to Karnataka Public Procurement Portal (KPPP).

However, the Tenderer shall submit such transaction details along with their Tender submission on e-Procurement portal. If the same transaction reference number has been submitted for more than one Bid, all such Bids shall be considered ineligible and summarily rejected.

It will be the responsibility of the Tenderer to check the website and see any Addendum /Corrigendum issued in this Tender from time to time and ensure submission of Tender submittals binding accordingly.

4. Tender documents consist of the following Sections,

- Section I - Notice Inviting Tenders (NIT)
- Section II - Instructions to Tenderers (ITT)
- Section III - Qualification Information
- Section IV - Form of Tender (FOT)
- Section V - General Conditions of Contract (GCC)
- Section VI - Special Conditions of Contract (SCC)
- Section VII - Technical Specifications & Scope of Work
- Section VIII - System Description, Checklists, List of Assets
- Section IX - Proforma of Bank Guarantees
- Section X - Annexures
- Section XI - Instructions for completing Pricing Document

5. Tenders must be accompanied by **Tender Security / Earnest Money Deposit (EMD)** as specified in ITT clause 14, drawn in favour of "Bangalore Metro Rail Corporation Ltd". Tender Security/EMD will have to be paid in full amount through online payment in e-Procurement Portal (or) submit in any one of the form of **Electronic Bank Guarantee (eBG) or Bank Guarantee**, payable & extendable at a designated branch in Bengaluru and shall have to be valid for 45 days beyond the validity of the Tender (i.e. 165 days from the date of submission of Tender).

However, Micro and Small Enterprises (MSEs) registered with NSIC under a single point vendor registration scheme or having a valid Udyam Registration Certificate are exempted from payment of EMD, as defined under ITT clause 14.

6. Tenders must be submitted electronically through Karnataka Public Procurement Portal /eProcurement Portal (<https://kppp.karnataka.gov.in/>) before the last date & time prescribed in the e-Procurement portal using a valid DSC (Digital Signature Certificate).

All Tenderers are requested to note that the originals of those documents, as listed under ITT clause 9.2, should be submitted in hardcopy by 'Speed post' or 'in person' at BMRCL office within **5 days** from the last date of Tender submission. Tender submission without such submission of original documents shall be liable for rejection.

7. Tenders cannot be submitted online after stipulated time of submission of Tender.
8. Tenders shall be valid for a period of **120 days** from the latest date of submission of Tenders.



9. 'Qualification cum Technical Package' will be opened as per the latest specified time and date published in the e-Procurement portal.
The Financial Packages of technically qualified Tenderers will be opened at a date and time advised by BMRCL through e-Procurement Portal.
10. The Tenderer shall provide credentials in support of their eligibility, qualifying criteria, technical capability, financial strength/support and past work experience by supporting documents / client certificates / CA's audit reports set forth in ITT Clause 3.
11. The Employer requires that Contractors observe highest standard of ethics during the procurement and execution of the Contract. In pursuance of this policy, The Employer;
 - (a) Will reject the Tender for the Work or rescind the Contract, if the Employer determines that the Tenderer / Contractor has engaged in corrupt or fraudulent practices.
 - (b) will declare a Contractor ineligible, either indefinitely or for a stated period of time, to be awarded a Contract, if the Employer, at any time, determines that the Tenderer or the Contractor has engaged in corrupt or fraudulent practices in competing for, or in executing, the Contract.
12. All Tenderers are hereby cautioned that Tenders shall be submitted without any deviation, alteration or modification. Tenders containing any deviation from contractual terms and conditions, specifications and other requirements shall be considered as non-responsive and shall be liable for rejection.
13. BMRCL reserves the right to accept or reject any or all Tenders in 'Part' or 'Full' without assigning any reason. No Tenderer shall have any cause of action or claim against BMRCL for rejection of his Tender.
14. Registered Tenderers with e-token are advised to frequently check the e-Procurement portal for any amendments like Addendum / Corrigendum.
15. BMRCL will not be held responsible for consequential damages/losses due to lack /interruption of power supply & internet, low speed of internet, System problems, loss of electronic information/data etc.
16. For further clarifications/details, contact: Dy. General Manager, BMRCL on +91 8277890455, E-mail: vijaygautam@bmrc.co.in.
17. For any query regarding e-Procurement portal/ Tender submission, please contact helpdesk at +91-80-46010000, +91-80-68948777, Email: support@eprochelpdesk.com.

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ED (O&M)
Bangalore Metro Rail Corporation Limited



(B) KEY DETAILS

1.	Tender No.	BMRCL/O&M/SIG/PMC/02
2.	Name of Work	ANNUAL PREVENTIVE MAINTENANCE CONTRACT FOR SIGNALLING SYSTEMS INSTALLED IN REACH-5 STATIONS, HEBBAGODI DEPOT AND OCC & BCC
3.	Cost of Tender Document/ Tender Processing fee (Non-refundable)	As fixed by e-procurement Cell, Govt. of Karnataka
4.	EMD / Tender Security	INR 6,29,529/-(Indian Rupees Six Lakh Twenty Nine Thousand five hundred twenty nine only). EMD shall be valid for 165 days from date of tender submission. The Tenderer shall pay full EMD (Tender Security) amount through online payment in e-Procurement Portal (or) submit in the form of Electronic Bank Guarantee (eBG) /Bank Guarantee (BG). If Tender Document is received without the EMD for the requisite amount or without the valid BG, the Tender shall be rejected.
5.	Period of ON-LINE SALE of Tender Document	As per Date and Time specified in e-Procurement Portal.
6.	Last date of seeking Tender Clarification	As per Date and Time specified in e-Procurement Portal.
7.	Pre-bid meeting to be held on and place	As per Date and Time specified in e-Procurement Portal, at Office of ED (O&M) Bangalore Metro Rail Corporation Ltd (O&M Wing) Baiyappanahalli Depot, Administrative Building, Near NGEF Signal, Old Madras Road, Baiyappanahalli, Bangalore- 560038, Karnataka, India.
8.	Date and time for submission of Tender Document	As per Date and Time specified in e-Procurement Portal.
9.	Date and time of opening of Tenders (Tender Guarantee and 'Qualification cum Technical' packages)	As per Date and Time specified in e-Procurement Portal.
10.	Date and time of opening of Tenders (Financial Packages)	As per Date and Time specified in e-Procurement Portal.
11.	Contract Period	Five (05) years from the 'Start Date' as specified in LOA/NTP, as the case may be.
12.	Place of Submission and Opening of Tenders	Office of the ED (O&M), Bangalore Metro Rail Corporation Limited Admin Building, Baiyappanahalli Metro Depot Near NGEF Signal, Old Madras Road, Bangalore-560038, Karnataka, India



13.	Address for Communication	Office of the DGM(SIGNALLING), Bangalore Metro Rail Corporation Limited Admin Building, Baiyappanahalli Metro Depot Near NGEF Signal, Old Madras Road Bangalore-560038, Karnataka, India
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SECTION-II
INSTRUCTIONS TO
TENDERERS (ITT)



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SECTION II - INSTRUCTIONS TO TENDERERS**(A) GENERAL****1. Description of the Work:**

- 1.1 Bangalore Metro Rail Corporation limited (BMRCL), a Special Purpose Vehicle (SPV) established under the Companies Act, 1956 (hereinafter referred to as "BMRCL" or "the Company" or "the Employer" or "the Client"), invites Tenders following single stage Two envelop Tender procedure from the eligible domestic Tenderers for "ANNUAL PREVENTIVE MAINTENANCE CONTRACT FOR SIGNALLING SYSTEMS INSTALLED IN REACH-5 STATIONS, HEBBAGODI DEPOT AND OCC & BCC" (hereinafter referred to as "the works") as per Terms and Conditions contained in this Tender Documents.

2. Eligible Tenderers:

- 2.1 Tenderers (either individually or as a JV/Consortium) shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Government of Karnataka or BMRCL.
- 2.2 The Tenderer (either individually or as a JV/Consortium) should not have been blacklisted / debarred by any Government / Government undertaking / Semi Government / Govt. Controlled Institutions/projects/ during last five (5) years. Also the Tenderer should not have rescinded the Works after award of the Contract during last five (5) years. The Tenderer shall provide an Undertaking as provided at **Annexure-4 of Section X**.

Note: Last five (5) years shall be counted from 28 days prior to the date of submission of the Tender.

- 2.3 The Tenders for this Contract will be considered only from those Firms, Companies, Corporations, Partnerships, Consortia and Joint venture (group) who pass the 'Eligibility/Qualification Criteria' as specified in clause 3. Financial Package of only such qualified and technically compliant Tenderers will be evaluated.
- 2.4 Any change in the composition of a Consortium or Joint venture after submission of Tender will not be permitted and such a Tender will be rejected.
- 2.5 A Tenderer may be a Private entity or a Government-owned entity or any combination of such entities in the form of a Joint venture (JV)/ Consortium. In the case of a Joint venture/ Consortium:
- a) all members shall be 'jointly and severally liable' for the execution of the Contract in accordance with the Contract terms,
 - b) shall submit a notarized Memorandum of Understanding (MoU) OR Consortium / JV Agreement, comprising of all the members.
 - c) the JV/ Consortium shall nominate a Representative (Leader) who shall have the authority to conduct all business for and on behalf of any and all the members of the JV/ Consortium during the Tendering process and in the event the JV/ Consortium is awarded the Contract, during Contract execution,
 - d) maximum number of members in the JV/ Consortium shall be Two (2),
 - e) all the members shall submit complete details of the proposed division of role, responsibilities and corporate relationships among the individual members.
 - f) the member in charge (Leader) shall be authorized to incur liabilities, receive payments and receive instructions for and on behalf of any or all members of the Joint venture/Consortium.
 - g) the Tender shall be signed by member having authority so as to be legally binding on all members of the Partnership, Consortium or Joint venture.

- 2.6 Any Tenderer (in case JV, each member) from a country which shares a land border with India will be eligible to bid in this tender, only if the Tenderer is registered with the Competent Authority. The



Competent Authority for registration will be the Registration Committee constituted by the Department for Promotion of Industry and Internal trade (DPIIT). For details refer to order (Public Procurement No.1) F.No.6/18/2019-PPD dtd.:23/07/2020, Ministry of Finance, Department of Expenditure, Public Procurement Division and its latest amendments.

- 2.6.1 This clause will not apply to Tenderers from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects.
- 2.6.2 All the participating tenderers are mandatorily required to submit a certificate along with the tender regarding their compliance with this clause/order in regard to restrictions of procurement from the Tenderers from countries sharing land borders with India as per the format included in Annexure-8 of Section X. If such certificate given by a Tenderer whose bid is accepted is found to be false, this would be a ground for immediate termination and further legal action in accordance with law."
- 2.7 The tenderer (either individually or as a JV/Consortium) should meet the Qualification Criteria, stated in clause 3 below.

3. Qualification Criteria:

3.1 Work Experience:

The Tenderer participating in his individual capacity/JV/Consortium shall have the following capabilities and experience as detailed under para 3.1, 3.2 and 3.3 below. In case of JV/Consortium, the members shall collectively have the following capabilities and experience:

- a) Signalling works involving Point machines, Multi aspect colour Light Signals, Track circuits (AFTC or Axle Counters) and power supply equipments.
- 3.2 To Qualify for award of this contract, each tenderer (either individually or as a JV/Consortium) in its name should have
- a) satisfactorily completed the Signalling works involving Point machines, Multi aspect colour Light Signals, Track circuits (AFTC or Axle Counters) and power supply equipments:
- At least one work value of more than INR 67.2 Lakh during the last five (5) years[^].
 - At least two work value of more than INR 42 Lakh during the last five (5) years[^].
 - At least three work value of more than INR 33.6 Lakh during the last five (5) years[^].

Note:

- The Tenderer should submit the Work experience certificate issued by the client for having executed the works.*
- 'Satisfactory completion' means Substantial completion of 80% or more physical work/s under the contract. The said work/s should have been commissioned and in Revenue Operation as of 28 days prior to the date of submission of Tender.*
- [^] The last five (5) years means the last five (5) years counted 28 days prior to date of Tender Submission.*
- In Contracts where the Tenderer has participated as JV member, only the Tenderer's/member's share shall be considered to meet the requirement.*
- Ongoing works, value of works that have been commissioned and in Operation as of 28 days prior to the date of submission of Tender shall only be considered.*



3.3 Financial Capabilities

Each Tenderer should further demonstrate:

(i) In case of single entity:

- a) **Annual Turnover:** Achieved a minimum annual financial turnover of INR 1.68 Crore in at least two of the last five financial years. (i.e. FY 2019-20 to FY 2023-24)
- b) **Liquidity:** Access to Liquid Assets and /or availability of credit facilities of not less than Rs. 21 Lakh (Credit lines/ letter of credit/ certificates from banks for meeting the fund requirement, etc.)
- c) **Net Worth:** As a minimum requirement, the Tenderers net worth, calculated as defined in Annexure-6, should be positive for the last Two (02) financial years.

(ii) In case of JV/Consortium:

a) **Annual Turnover:**

Any one member shall have a minimum annual turnover of INR 1.68 Crore in at least two of the last five financial years. (i.e. FY 2019-20 to FY 2023-24).

The other member shall have a minimum annual turnover of INR 42 Lakh in at least two of the last five financial years. (i.e. FY 2019-20 to FY 2023-24).

b) **Liquidity**

Any one member shall have access to Liquid Assets and /or availability of credit facilities of not less than INR. 10.5 Lakh. All the members together shall have a minimum Liquid Assets and /or availability of credit facilities of not less than INR. 21 lakh (Credit lines/ letter of credit/ certificates from banks for meeting the fund requirement etc.)

- c) **Net Worth:** As a minimum requirement, the Tenderers net worth, calculated as defined in Annexure-6, should be positive for the last Two (02) financial years.

3.4 Not used

3.5 Subcontractors' experience and resources shall not be taken into account in determining the Tenderer's compliance with the Qualifying Criteria.

3.6 Even though the Tenderers meet the above Qualification Criteria, they are subject to be disqualified, if they have;

- made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- record of poor performance such as abandoning the works, not properly completing the Contract, inordinate delays in completion, litigation history, or financial failures etc.; and/or
- Participated in the previous Tender for the same work and had quoted unreasonably high Tender prices and could not furnish rational justification.

4. Cost of Tendering:

4.1 The Tenderer shall bear all costs associated with the preparation and submission of its Tender and BMRCL will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the Tender process.



(B) TENDER DOCUMENTS**5. Content of Tender documents**

- 5.1 Tendering procedures and Contract terms are prescribed in the Tender documents. The Tender document shall include:

Volume 1: Qualification cum Technical Package

- I. Notice Inviting Tender (NIT)
- II. Instructions to Tenderers (ITT)
- III. Qualification Criteria
- IV. Form of Tender (FOT)
- V. General Conditions of Contract (GCC)
- VI. Special Conditions of Contract (SCC).
- VII. Technical Specification and Scope of Work
- VIII. System Description, Checklists, List of Assets
- IX. Proforma of Bank Guarantees
- X. Annexures
- XI. Any other document listed as forming part of the Contract.

Volume 2: Financial Package**Bill of Quantities (Pricing Document)**

- 5.2 The Tenderer is expected to examine all Instructions, Forms, Terms, Specifications and Scope of Work in the Tender documents. Failure to furnish all information required by the Tender documents or submission of a Tender not substantially responsive to the Tender documents in every respect will be at the Tenderer's risk and may result in rejection of its Tender.

6. Clarification of Tender Documents

- 6.1 Tenderers shall carefully examine the Tender documents and fully understand the conditions and matters which may affect the work or the cost thereof. In case the Tenderer finds any discrepancies or omission from the specification or other documents, or in doubt as to their meaning, the Tenderer shall at once address query(ies) online through Karnataka Public Procurement Portal (e-Procurement portal).

- 6.2 The Employer will offer clarification to such queries received through e-Procurement portal upto the date specified therein.

Any such queries with details of clarification sought, will be uploaded in the eProcurement portal (<https://eproc.karnataka.gov.in>) without disclosing the identity of the Tenderer seeking clarification. No separate future communication in this regard will be entertained.

- 6.3 While all efforts have been made to make the Tender document error free, the Tenderer is advised to check the same carefully and may seek clarification(s) if any within the scheduled period only. No claims on account of any error(s), detected in the Tender document, shall be entertained.

6.4 Pre-bid meeting:

- 6.4.1 The Tenderer or his authorized representative is invited to attend a Pre-bid meeting held at the Place, date and time indicated in in Key Details Section-I of NIT/ e-Procurement Portal.
- 6.4.2 The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage to enable the Tenderers to submit Tenders without conditions.
- 6.4.3 The Tenderer is requested to submit any questions online through Karnataka Public Procurement Portal (e-Procurement portal) only, in terms of ITT clause 6.1.
- 6.4.4 BMRCL will offer clarifications to the questions raised by the Tenderers through online and received by BMRCL (without identifying the source of enquiry) and the responses will be given through



online. Any modification of the Tender documents listed in ITT Sub-clause 5.1 which may become necessary as a result of the Pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to ITT Clause 7.

6.4.5 Non-attendance at the Pre-bid meeting will not be a cause for disqualification of a Tenderer.

7. Amendment of Tender documents

7.1 At any time prior to the deadline for submission of Tenders, the Employer may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Tenderer, modify the Tender documents by an Addenda/Corrigenda.

7.2 Such Addenda/Corrigenda will be uploaded in the eProcurement portal. It will be the responsibility of the Tenderer to frequently check the e-Procurement portal for any Addenda/Corrigenda or any other updates issued from time to time and ensure submission of Tender accordingly.

7.3 To give prospective Tenderers reasonable time in which to take an amendment into account in preparing their Tenders, the Employer shall extend as necessary the deadline for submission of Tenders, in accordance with ITT Sub-Clause 17.2 below.

7.4 Without prejudice to the order of preference, the provisions in such addenda shall take priority over the Tender document issued previously. The Tenderers should acknowledge receipt of such addenda and list them in the Tender submittals.

7.5 The Tenderer is not permitted to make any alteration /modifications to the Tender conditions. No modifications to the specifications, item descriptions, etc. will be entertained.

8. Language of Tender

The Tender prepared by the Tenderer, as well as all correspondence and documents relating to the Tender exchanged by the Tenderer and the Employer, shall be written in English language. Supporting documents and printed literature furnished by the Tenderer may be in another language provided they are accompanied by an accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the Tender, the translation shall govern.

C. PREPARATION OF TENDERS

9. Documents comprising the Tender

9.1. The Tender duly filled & signed and submitted by the Tenderer shall be in Two (2) Electronic Documents in e-procurement platform and shall contain the documents as follows:

9.1.1 Qualification cum Technical Package

- Earnest Money Deposit (EMD) /Tender Security (in accordance with ITT Clause 14);
- The Form of Tender (in the format indicated in Section 4);
- Qualification Information Form and Documents (in accordance with Section 3) and any other submissions as per requirements of Tender Document;
- Covering Letter stating any other matter in relation to his Tender which the Tenderer considers should be drawn to the particular notice of BMRCL.

and any other documents required to be completed and submitted by Tenderers in accordance with these instructions. **The documents listed under Sections 3 and 4 shall be filled in without exception.**

9.1.2 Financial Package

- The Tenderer shall fill in and complete the Bill of Quantities (Financial Package) online through Karnataka Public Procurement Portal only and **no hardcopy of commercials should be attached or disclosed elsewhere.**

The Tenderer shall fill in and complete the 'Bill of Quantities' in accordance with the 'Instructions for completing the Pricing Document', Section-11.



9.2. Original Documents (Hardcopy):

The Tenderer is required to submit the following documents in original (hard copy) within the time and place mentioned in ITT clause 16.7:

- i) Tender Security/Earnest Money Deposit(EMD), as per clause 14,
- ii) Notarized Power of Attorney and Board resolution (as applicable) as per ITT clause 15,
- iii) All uploaded documents
- iv) Hardcopy of any other documents explicitly required in Tender document.

In case of failure in submission of the above documents within stipulated date, the Tender may be treated as incomplete and be liable for rejection.

- 9.3. Tenderers submitting Tenders together with other Contracts stated in the NIT to form a Package, will so indicate in the Tender together with any discounts offered for the award of more than one Contract.

10. Form of Tender

The Tenderer shall complete the Form of Tender furnished in the Tender documents and submit duly signed and stamped along with the Qualification cum Technical Package.

11. Tender prices

- 11.1 The Contract shall be for the whole of the CAMC works as described in Clause 1 of ITT, based on the priced Bill of Quantities submitted by the Tenderer.

- 11.1.1 The quoted price shall be inclusive of all applicable Taxes, duties and Cess under applicable law but exclusive of CGST & SGST. BMRCL shall pay the CGST & SGST as applicable as per law. The quoted price shall also include insurance, transportation up to destination, handling, installation, royalties & any other charges leviable and payable by the Contractor to the authorities and including Tax to be deducted at source as defined in ITT Clause 11.

- 11.1.2 The evaluation and comparison of Tenders shall be made accordingly by BMRCL. No claim will be entertained on this account after acceptance of the Tender or during the currency of the Contract.

11.1.3 **Income Tax (IT) deduction:**

As per the prevailing rate, IT shall be deducted and remitted to the Income Tax authorities and Form 16 shall be furnished by BMRCL in proof of remittance to IT Department. For availing lower deduction of Income Tax, necessary certificate for each financial year issued by the Income Tax Authority shall be furnished by the Contractor, failing which IT at the maximum rate will be deducted.

- 11.2 Not used

- 11.3 The Price quoted by the Tenderer shall be fixed for the duration of the Contract and shall not be subject to adjustment on any account unless provided in General conditions of Contract.

- 11.4 A Tender submitted with an adjustable price quotation will be treated as non-responsive and rejected, pursuant to ITT Clause 23.

- 11.5 Proof of GST paid to the Government shall be submitted to BMRCL along with succeeding Bills and the GST paid against the final bill shall be submitted before release of Performance Bank Guarantee".

12. Tender Currency

- 12.1 Prices shall be quoted in Indian Rupees only.



13. Tender validity

- 13.1 Tenders shall remain valid for a period as specified in 'Appendix to Form of Tender' (Section IV) from the last date of Tender submission as specified in Clause 17 of ITT. A Tender valid for a shorter period shall be rejected by the Employer as non-responsive.
- 13.2 In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the Tenderers may extend the period of validity for a specified additional period. The request and the Tenderers' responses shall be made in writing or by cable. A Tenderer may refuse the request without forfeiting his Earnest Money Deposit. A Tenderer agreeing to the request will not be required or permitted to modify his Tender but will be required to extend the validity of his Earnest Money Deposit for a period of the extension, and in compliance with ITT Clause 14 in all respects.

14. Earnest Money Deposit (EMD)

- 14.1 The Tenderer shall furnish, as part of its Tender, interest free Tender Security/ EMD as per eProcurement Portal.
- 14.2 The Earnest Money Deposit is required to protect the Employer against the risk of Tenderer's conduct which would warrant the Security's forfeiture, pursuant to ITT Clause 14.8.
- 14.3 The Tenderer shall pay/furnish an EMD (Tender Security) for the value indicated in e-Procurement portal in the following mode:

- a) **Online payment** through e-Procurement portal, or
- b) an irrevocable **Electronic Bank Guarantee (eBG) or Bank Guarantee***, issued from an Indian Scheduled Bank (excluding Cooperative Banks) or from a Scheduled Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with Second Schedule preferably drawn on and payable & extendable at a designated branch in Bengaluru in the form given in Proforma A of Section 9 to the Tender document. However, 'Earnest Money Deposit' Bank Guarantee format is also available in <https://tenderb.bmrc.co.in>.

** In case of Tender Security/EMD issued in the form of Bank Guarantee, the Scheduled Bank issuing the Bank Guarantee should preferably be on "Structure Financial Messaging System (SFMS)" platform. A separate advice of the BG shall preferably be sent by the issuing bank to the Employer's Bank through SFMS.*

The issuing Bank shall send the SFMS as detailed under to:

Name: BANGALORE METRO RAIL CORPORATION LTD.,

Name of the Bank: BANK OF INDIA

Branch: CANTONMENT BRANCH, BENGALURU.

Account No.: 840420110000760

RTGS/IFSC: BKID0008404



The Scanned copy of the BG and a copy of "MT760COV (for Bank Guarantee message) /MT767COV (for Bank Guarantee amendment message) Report" sent by the BG issuing Bank, should be uploaded by the Tenderer in the e-Procurement Portal as a part of his Offer during Tender submission. The Tenderers should ensure that both the documents (scanned copy of BG and copy of SFMS message) are uploaded to the e-Procurement portal, failure of which, the Tender will be summarily rejected by the Employer. The Original Bank Guarantee shall compulsorily be submitted in the BMRCL office before scheduled date, time and place as specified under ITT clause 16.7. The Tenderer shall note that the Original Bank Guarantee is submitted through speed post / in person and if not received before the scheduled date and time as specified in ITT clause 16, the Tender will be summarily rejected.

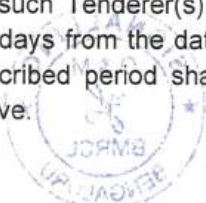
The details of the Bank Guarantee, physically submitted should match with the details available of the scanned copy uploaded and the data entered during Tender submission time, failing

which, the Tender will be rejected.

In case of non-reconciliation of online EMD (Tender Security) portion through e-Procurement portal in Government of Karnataka Central Pooling Account held at the ICICI Bank, the Tender will get rejected.

- 14.4 The Earnest Money Deposit shall be valid for a period as specified in Appendix to Form of Tender (Section IV) and remain deposited with the Employer from the date of opening of Tenders. If the validity of the offer is extended, the Earnest Money Deposit (EMD) shall also be duly extended, failing which, the offer after the expiry of the aforesaid period shall not be considered by the Employer.
- 14.5 Tender Security / EMD will not be accepted in any form other than those mentioned above. Tenders not accompanied by the required amount of Tender Security/EMD and non-submission of hard copy as per ITT clause 16.7 will be rejected by the Employer.
- 14.6 Unsuccessful Tenderer's Earnest Money Deposit (EMD) will be discharged / returned upon the Successful Tenderer signing the unconditional acceptance of the Letter of Acceptance (LoA) communicated by the Employer in pursuant to ITT clause 29 and furnishing the Performance Security by them pursuant to ITT clause 30.
- 14.7 The successful Tenderer's Earnest Money Deposit (EMD) will be discharged upon the Tenderer signing the unconditional acceptance of the Letter of Acceptance (LOA) communicated by the Employer in pursuant to ITT clause 29 and furnishing the Performance Security pursuant to ITT Clause 30.
- 14.8 The Earnest Money Deposit (EMD) may be forfeited:
 - (a) If a Tenderer:
 - (i) withdraws or amends or impairs or derogates its Tender during the period of Tender validity specified by the Tenderer on the 'Form of Tender'; or
 - (ii) does not accept the correction of errors pursuant to ITT Clause 24.2; or
 - (b) In case of a successful Tenderer, if the Tenderer fails:
 - (i) To sign the Contract Agreement in accordance with ITT Clause 29; or
 - (ii) To furnish performance security in accordance with ITT Clause 30.
- 14.9 The Tender will be summarily rejected by the Employer in case of:
 - (i) **Failure to deposit online EMD portion or failure to upload clear & readable copy of Bank Guarantee towards EMD.**
 - (ii) **Failure to submit the original Bank Guarantee /EMD to BMRCL office within the date & time specified,**
 - (iii) **If EMD(Tender Security) is in the form of Bank Guarantee and is from any source other than an Indian Scheduled Bank and Scheduled Foreign Bank as defined in section 2(e) of RBI Act 1934 read with Second Schedule.**
 - (iv) **EMD (Tender Security) in the form of Bank Guarantee is from a Co-operative Bank.**
 - (v) **EMD (Tender security) amount is less than the required amount as mentioned in NIT.**
 - (vi) **Bank Guarantee's Validity is less than Tender as mentioned in ITT clause 14.5.**

In case EMD (Tender Security) is in the form of BG, and BG validity fulfils the "Tender validity Period", but falling short in regard to period of "EMD (Tender Security) Validity", the Employer shall request such Tenderer(s) in writing to submit compliance EMD / Tender Security within 10 (ten) working days from the date of request. Failure to provide a compliant EMD (Tender Security) within the prescribed period shall cause the rejection of the Tender and it will be considered as Non-responsive.



- 14.10 In case the Tenderer submits Electronic Bank Guarantee (e-BG), the UIN of BMRCL for providing e-BG shall be: AAACB4881D (PAN of BMRCL).
- 14.11 If the Tenderer has opted to submit the Tender Guarantee in the form of Electronic Bank Guarantee (e-BG), a copy of the e-BG shall invariably be included in the Tender Guarantee envelope as per Cl. 9.2 and also uploaded in eProcurement portal in case of eProcurement.
- 14.12 **Exemption to MSEs:**
Notwithstanding above, Micro and Small Enterprises (MSEs) registered with NSIC under a single point vendor registration scheme / having a valid Udyam Registration Certificate are exempted from payment of Earnest Money Deposit (EMD).
However, the Tenderer who claim these benefits shall submit a valid copy of such Registration Certificate issued by the concerned Authority along with the Tender submittals, failure of which, the Tender is liable for rejection.
- 15. Format and signing of Tender**
- 15.1 The Tenderer shall follow and submit the Tender documents in the respective formats prescribed under Section 9-Proforma.
- 15.2 The Tender submittals shall be typed or written in indelible ink (wherever required), which is to be scanned and digitally signed using Class-III digital signature by person(s) duly authorized to bind the Tenderer to the contract. Proof of authorization shall accompany the Tender in the form of notarized "Power of Attorney". All pages of the Tender where entries, amendments, corrections, alterations, erasures etc., have been made shall be initialized by the person(s) signing the Tender.
- 15.3 The Tender shall contain no alterations or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the Tenderer, in which case such corrections shall be initialed by the person signing the Tender.
- 15.4 Any individuals signing the Tender or other documents connected therein should specify whether he is signing: -
- (i) As sole proprietor of the firm or as attorney of the sole proprietor.
 - (ii) As a partner or partners of the firm.
 - (iii) As a Director, Manager or Secretary in the case of a limited Company with a copy of Notarized Power of Attorney duly authorized by a resolution passed by the Board of Directors or in pursuance of the authority conferred by Memorandum of Association.
- 15.5 The original Notarized Power of Attorney or other documents empowering the individual or individuals to sign should be furnished to the Employer for verification, if required

D. SUBMISSION OF TENDERS

16. Sealing and marking of Tenders

- 16.1 All the Tender proposals shall be digitally signed along with the other Qualifying documents and shall be submitted Electronically through Karnataka Public Procurement Portal on or before the last date and time for Tender submission as published therein.
- 16.2 Tenderer, in advance, should get ready the Proposal documents to be submitted as indicated in the Tender document /schedule in PDF/JPEG formats. The Tenderer has to digitally sign and upload the required proposal documents one by one as indicated in the Tender document.
- 16.3 Tenderer should log into the Portal well in advance for the submission of the proposal so that it gets uploaded well in time i.e., on or before the last date & time for Tender submission.
- 16.4 Tenderer will be solely responsible for uploading the Tender submittals in eProcurement portal. BMRCL will not be held responsible for consequential damages/losses/delay due to lack



/interruption of power supply & internet, low speed of internet, System problems, loss of electronic information/data etc.

- 16.5 The server time (which is displayed on the dashboard) will be considered as the standard time for referring the deadline for submission of the proposals by the Tenderers, opening of proposals etc. The Tenderers should follow this time during proposal submission.
- 16.6 The necessary certificates/documents in support of fulfilling the Eligibility Criteria and Technical requirements shall be scanned and attached to e-Procurement portal.

16.7 Original Documents to be submitted in hardcopy:

The Tenderer shall seal and submit the original documents listed in ITT clause 9.2 in original (hard copy) at BMRCL office within 5 days of last date of online Tender submission. Only the Tenders submitted online and the hardcopies will be considered for evaluation. The hardcopies should carry/accompany copy of "acknowledgement from Employer/eProcurement Portal".

The envelope shall bear the following identification:

TENDER NO:

ORIGINAL SUBMITTALS OF QUALIFICATION CUM TECHNICAL PACKAGE

BMRCL Office Address for submission of hardcopy:

To,

Office of the ED(O&M),
Bangalore Metro Rail Corporation Limited
Admin Building, Baiyappanahalli Metro Depot
Near NGEF Signal, Old Madras Road,
Bangalore - 560038, Karnataka, India
Ph No: +91 8277890455
Email: vijaygautam@bmrc.co.in

The Tenderers can submit the hard copies by 'Speed Post' or 'in person' at the above address during 11.00 am to 05.00pm on all working days. In case, 5th day happens to be holiday, then the next working day shall be considered as last day for submission of the hard copy.

- 16.8 All Tenders shall be submitted without any deviations, alteration or modification, together with requisite Tender Security/EMD.
- 16.9 Telex, Facsimile or Emailed Tenders will be rejected.
- 16.10 Offer / Tender / Bid shall be as per the "Instructions to Tenderers", "General Conditions of Contract" and "Special Conditions of Contract" given in the Tender documents.
- 16.11 The Tenderer should avoid ambiguity in his Offer / Tender / Bid.

17. Deadline for submission of the Tenders

- 17.1 Tenders must be submitted online through Karnataka Public Procurement Portal (eProcurement Portal) on or before the date and time specified in the eProcurement Portal and in time submission of Tender is the responsibility of the Tenderer. Original Documents (Hard copy) as listed under ITT clause 9.2 shall be submitted in the place, date & time as specified in ITT clause 16.7.
- 17.2 The Employer may, at their discretion, extend the deadline for submission of Tenders by issuing an amendment in accordance with ITT Clause 7, in which case all rights and obligations of the Employer and the Tenderers previously subject to the original deadline will thereafter be subjected to the deadline as extended.



18. Late Tenders

- 18.1 In online e-Procurement Portal, the Tenderer shall not be able to submit the Tender after the last date and time for submission as the icon for the task in the e-Procurement Portal will be disabled. Hardcopies received by BMRCL after the deadline for submission as mentioned in ITT clause 16.7 will be rejected.
- Hard copies of those Tenders which have been uploaded in the e-Procurement Portal successfully only will be considered for evaluation.

19. Modification and Withdrawal of Tenders

- 19.1 Tenderer may notify and correct or upload any relevant document in the portal till Tender submission date and time as published in the e-Procurement Portal.
- 19.2 Tenderer may cancel/modify their bids online before the deadline for submission of bids.
- 19.3 No bid is allowed to be modified / cancelled online after the deadline for submission of bids.
- 19.4 Withdrawal or modification of a Tender between the deadline for submission of Tenders and the expiration of the original period of Tender validity specified in ITT Sub-clause 13.1 above or as extended pursuant to ITT Sub-clause 13.2 may result in the forfeiture of the Earnest money deposit pursuant to ITT Clause 14.8.

E. TENDER OPENING AND EVALUATION**20. Tender opening****20.1 Qualification Cum Technical Package:****20.1.1 Opening of Qualification Cum Technical Package of all Tenderers:**

First, the Employer will open the EMD/Tender Security and verify the Tender Security/EMD.

Further, the Employer will open the 'Qualification Cum Technical Package' of the Tenders whose EMD has been found acceptable, through e-Procurement Portal at the time and date specified in the eProcurement Portal. If Tender Security/EMDs are not in proper form, the 'Qualification Cum Technical Package' will not be opened for such Tenderers.

Interested Tenderers or their authorized representatives who choose to attend or may view the same on the portal on the scheduled date and time from their end. In the event of the specified date for Tender opening being declared a holiday by the Employer, the Tenders will be opened at the appointed time and location on the next working day.

20.1.2 The Tenderers will be examined for the following submittals:

- i) Presence of valid Tender Security/EMD
- ii) Presence of 'Qualification cum Technical Package' and all enclosures as per ITT clause 9.1 and,
- iii) Submission of original documents as per ITT clause 9.2.

20.1.3 The Employer will evaluate and determine whether each Tender

- (a) meets the eligibility criteria defined in ITT Clause 2;
- (b) is accompanied by the required Earnest Money Deposit as per stipulations in ITT Clause 14; and
- (c) meets the minimum qualification criteria stipulated in ITT Clause 3.

The Employer will draw out a list of qualified Tenderers.

20.1.4 The Employer shall prepare Minutes of the Tender opening, including the information disclosed to those present.

- 20.1.5 If any Tender contains any deviation from the Tender documents and /or if the same does not contain Tender Security in the manner prescribed in the Tender documents, then that Tender is liable for rejection. Incomplete Tenders in respect of above would be rejected.

Tenderers, whose 'Qualification cum Technical Package' are found acceptable after evaluation, would be informed of the date and time of opening of 'Financial Package' through e-Procurement Portal.

20.2 Financial Package

20.2.1 Opening of Financial Package of Qualified Tenderers:

The Financial Package of the Tenderers, whose 'Qualification cum Technical package' were found acceptable, will be opened in the presence of those Tenderers or their representatives, who choose to be present and also can view the opening on e-Procurement portal from their end. In the event of the specified date for Financial Package opening being declared a holiday by the Employer, the Tenders will be opened at the appointed time on the next working day.

- 20.2.2 Any modifications of the Price Bid shall be in the e-Procurement Portal itself.

- 20.2.3 The Tenderers names, the Tender prices, the total amount of each Tender, any discounts, Tender modifications and withdrawals, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening. No Tender shall be rejected at Tender opening.

- 20.2.4 The Employer shall prepare Minutes of the Price Bid Tender opening, including the information disclosed to those present in accordance with ITT Sub-clause 20.2.3. The proceedings of the same shall be uploaded/updated on e-Procurement Portal <https://kppp.karnataka.gov.in>.

Further, it is to be noted that mere announcement of the Tender prices, Total amount quoted by the Tenderers shall not be construed as Final until and unless the Employer declares the successful Tenderer taking into account the Cl. 22, 23, 24 and 25 below.

- 20.2.5 Conditional Tenders are not acceptable and will be summarily rejected.

21. Process to be confidential

- i) Information relating to the examination, clarification, evaluation and comparison of Tenders, and recommendations for the award of a contract, shall not be disclosed to Tenderers or any other person not officially concerned with such a process until the award to the successful Tenderer has been announced.
- ii) From the time of Tender opening to the time of Contract award, no Tenderer shall contact the Procuring Entity on any matter related to the Tender, except on request and prior written permission.
- iii) Any effort by the Tenderer to influence the Procuring Entity in Tender evaluation, Tender comparison or Contract award decisions will vitiate the process and will result in the rejection of the Tenderer's offer.

22. Clarification of Tender submittals

- 22.1 To assist in the examination, evaluation, and comparison of Tenders, the Employer may, at his discretion, ask any Tenderer for clarification of his Tender, including break up of unit rates. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the Tender shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Tenders in accordance with ITT Sub-clause 24.

- 22.2 Subject to ITT sub-clause 22.1, no Tenderer shall contact the Employer on any matter relating to its Tender from the time of the Tender opening to the time of the Contract is awarded. If the Tenderer



wishes to bring additional information to the notice of the Employer, it should do so in writing.

- 23.2 Any effort by the Tenderer to influence the Employer in the Employer's Tender evaluation, Tender comparison or Contract award decisions may result in the rejection of the Tenderer's Tender.

23. Examination of Tenders and determination of responsiveness

- 23.1 The Employer will examine the Tenders to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Tenders are generally in order.
- The Employer may waive any minor informality or non-conformity or irregularity in a Tender which does not constitute a material deviation, provided such a waiver does not prejudice or affect the relative ranking of any Tenderer.
- 23.2 A substantially responsive Tender is one which conforms to all the terms, conditions, and specifications of the Tender documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works; (b) which limits in any substantial way, inconsistent with the Tender documents, the Employer's rights or the Tenderer's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other Tenderers presenting substantially responsive Tenders.
- 23.3 If a Tender is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

24. Correction of errors

- 24.1 Tenders determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:
- (a) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern, unless in the opinion of the Employer there is an obvious gross misplacement of the decimal point in the unit rate, in which case the line item total as quoted will govern and the unit rate will be corrected.
 - (b) If there is an error in a total corresponding to the addition or subtraction of sub-totals, the sub-totals shall prevail and the total shall be corrected; and
 - (c) where there is a discrepancy between the rates in figures and in words, the **words will govern**; and
- 24.2 The amount stated in the Tender will be adjusted by the Employer in accordance with the above procedure for the correction of errors and shall be considered as binding upon the Tenderer. If the Tenderer does not accept the corrected amount the Tender will be rejected, and the Earnest money deposit may be forfeited in accordance with ITT Sub-Clause 14.8.

25. Evaluation and comparison of Tenders

- 25.1 The Employer will evaluate and compare only the Tenders determined to be substantially responsive in accordance with ITT Clause 23. No Tender will be considered if complete requirements covered in the Schedule is not included in the Tender.
- 25.2 In evaluating the Tenders, the Employer will determine for each Tender the evaluated Tender Price by adjusting the Tender Price as follows:
- (a) Making any correction for errors pursuant to ITT Sub-clause 24; and
 - (b) Making appropriate adjustments to reflect discounts or other price modifications offered.
- 25.3 The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors which are in excess of the



requirements of the Tender documents or otherwise result in unsolicited benefits for the Employer shall not be taken into account in Tender evaluation.

- 25.4 The Tenders received will be evaluated by the Employer to ascertain the lowest acceptable Tender in the interest of the Employer, as specified in the specification & Scope of Work and Tender documents. Evaluation criteria not mentioned herein but mentioned specifically in the technical specifications will be taken into consideration in the evaluation of offers.
- 25.5 The estimated effect of the price adjustment conditions, under relevant Clause of the General Conditions of Contract, during the implementation of the Contract, will not be taken into account in Tender Evaluation
- 25.6 If the Tender of the successful Tenderer is seriously unbalanced in relation to the Employer's estimate of the cost of the work to be performed under the Contract, the Employer may require the Tenderer to produce detailed price analysis for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the CAMC methods and schedule proposed. After evaluation of the price analysis, the Employer may require that the amount of the Performance Security set forth in ITT Clause 30 be increased at the expense of the successful Tenderer to a level sufficient to protect the Employer against financial loss in the event of default of the successful Tenderer under the Contract, subject to conditions as specified in Special Conditions of Contract.

F. AWARD OF CONTRACT

26. Award criteria

- 26.1 Subject to ITT Clause 28, the Employer will award the Contract to the Tenderer whose Tender has been determined to be substantially responsive to the Tender documents and who has offered the lowest evaluated Tender Price, provided that such Tenderer has been determined to be
- Eligible in accordance with the provisions of ITT Clause 2, and
- Qualified in accordance with the provisions of ITT Clause 3.

27. Employer's right to vary Quantities during the Contract

- 27.1 The Employer reserves the right during the pendency of Contract to increase or decrease the quantity of the items originally specified in the Bill of Quantity without any change in unit price or other terms and conditions as defined in GCC Clause 34 and the respective Special Conditions of Contract.

28. Employer's right to accept any Tender and to reject any or all Tenders

- 28.1 Notwithstanding ITT Clause 26, the Employer reserves the right to accept or reject any Tender, and to cancel the Tender process and reject all Tenders, at any time prior to the award of Contract, without thereby incurring any liability to the affected Tenderer or Tenderers or any obligation to inform the affected Tenderer or Tenderers of the grounds for the Employer's action.
- 28.2 BMRCL reserves the right to accept the Tender in part or full which is monetarily beneficial to BMRCL. BMRCL's decision in this regard shall be final and binding.

29. Notification of award and signing of Agreement

- 29.1 The Tenderer whose Tender has been accepted will be notified of the Award by the Employer prior to expiration of the Tender validity period by email confirmation by registered letter. This letter (hereinafter and in the General Conditions of Contract called the "Letter of Acceptance") will state the sum that the Employer will pay the Contractor in consideration of the execution, completion and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").



- 29.2 The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provisions of ITT Clause 30.
- 29.3 The Agreement will incorporate all agreements between the Employer and the successful Tenderer within 30 days of issue of LOA, the successful Tenderer will be required to execute the Contract Agreement and deliver it to the Employer.
- 29.4 Upon the furnishing of the Security deposit by the successful Tenderer, the Employer will promptly notify the other Tenderers that their Tenders have been unsuccessful and will discharge its Earnest Money Deposit, pursuant to ITT Clause 14.
- 29.5 The cost of stamp duties & similar charges imposed by law shall be borne by the Contractor.

30. Security deposit / Performance Security

- 30.1 Within 15 days of receipt of the Letter of Acceptance, the successful Tenderer shall deliver to the Employer, a Security deposit in accordance with GCC Clause 25 and format given in **Proforma B of Section IX** for an amount as specified in 'Appendix to Form of Tender' (Section IV).
- 30.2 Failure of the successful Tenderer to comply with the requirements of ITT Sub-Clause 30.1 shall constitute sufficient grounds for cancellation of the award and forfeiture of the Earnest money deposit.

31. Corrupt or Fraudulent practices

- 31.1 The BMRCL requires that the Tenderers observe the highest standard of ethics during the procurement and execution of such Government financed Contracts. In pursuance of this policy, BMRCL:
- (a) defines, for the purposes of this provision, the terms set forth as follows:
 - (i) "Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in Contract execution; and
 - (ii) "Fraudulent practice" means any omission or misrepresentation of facts in order to influence a procurement process or the execution of a Contract to the detriment of BMRCL/Government and includes collusive practice among Tenderers (prior to or after Tender submission) designed to establish Tender prices at artificial non-competitive levels and to deprive BMRCL of the benefits of free and open competition.
 - (b) will reject a proposal for award if it determines that the Tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the Contract in question;
 - (c) will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a Government financed Contract, if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Government financed Contract.

- 31.2 Furthermore, Tenderers shall be aware of the provision stated in GCC sub-clause 46.2 and 47.2.

32. One Tender per Tenderer

Each Tenderer shall submit only one (01) Tender. A Tenderer who submits or participates in more than one Tender (other than as a subcontractor or in cases of alternatives that have been permitted or requested) will cause all the proposals with the Tenderer's participation to be disqualified.

33. Site visit

- 33.1 The Tenderer at his own responsibility and risk is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Tender and entering into CAMC of Johnson & Escalators. The cost of visiting the Site shall be at the Tenderer's own expense.



- 33.1 The Tenderers are requested to satisfy themselves regarding the availability of water, requirement of electricity, nature and location of work, the configuration of the ground, the type, quality and quantity of the materials, the type of equipment and facilities needed preliminary to and during the progress of the services. He should also assess the law-and-order situation, the general and local conditions, the labour conditions prevailing there in and all other matters which can in any way affect the services under Contract. The Tenderer will be fully responsible for the financial effect of any or all the above factors in his rates including also the factors like age of equipment's, types of contract, Working Environment, furniture, etc. installed in BMRCL campus. **No compensation will be given on account of ignorance of any of the factors during execution of the works.**
- 33.2 The Tenderer and any of his personnel or agents will be granted permission by the Employer to enter upon their premises and lands for the purpose of such inspection, but only upon the express condition that the Tenderer, his personnel and agents will release and indemnify the Employer their personnel and agents from and against all liabilities in respect thereof and will be responsible for personal injury (whether fatal or otherwise), loss of or damage to property and any other loss, damage, costs and expenses however caused which but for the exercise of such permission would not have arisen.
- 33.3 Before submitting a Tender, the Tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the works, that all conditions liable to be countered during the execution of the works are taken into account and that the rates the Tenderer enters in the Tender forms are adequate and all inclusive for the completion of work to the entire satisfaction of the Employer.
- 33.4 The Prospective Tenderer shall study Installed Escalator system during site visit. Any details regarding the same, if required, shall be notified to the employer pursuant to Clause 22 of ITT and the same will be furnished during Pre-Bid meeting/clarification and will be uploaded in the web portal.
- 33.5 While all efforts have been made to avoid errors in drafting the Tender documents & the Tenderer is advised to check the same carefully and seek clarification within the schedule period only. No claim on account of any errors detected in the Tender Document shall be entertained.

34. Sufficiency of Tender

- (a) The Tenderer shall be entirely responsible for sufficiency of Prices quoted for the works.
- (b) The Tenderer shall be paid for only at quoted/accepted Prices for the activities given in the Specifications/ Scope of work.
- (c) The Tenderer shall be deemed to have satisfied himself before Tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Bill of Quantities which rates and prices shall except as otherwise provided, cover all his obligations under the Contract and everything necessary for the proper completion of the works.
- (d) If required Tenderer shall obtain clearances from concerned local authorities at his cost. The Tenderer shall also co-ordinate with any other agency working in the same project, compare plans, specifications and the time schedules and so arrange his work that there will be no interference. BMRCL shall entertain no claim on this account.
- (e) The cost of any item for which Tenderer has failed to enter rate shall be deemed to be covered by other rates entered in the Bill of Quantities.

G. PREFERENCE TO MAKE IN INDIA

35. Local Content & Purchase Preference

35.1 Local Content (LC):

The Tenderer shall provide an undertaking that the local content towards manpower meant for



CAMC shall be 100%.

However, a Tenderer who has been debarred by any procuring entity, for violation of any Procurement Preference Order/Policy, shall not be eligible to participate in this bid process during the period of the debarment.

35.2 Not Applicable

36. Eligible Source Countries of the Tenderer

36.1 Any Tenderer, from a country which shares a land border with India, to which the Govt. of India has not extended lines of credit or in which the Govt. of India is not engaged in development projects, will be eligible to bid in this Tender only if the Tenderer is registered with the "Competent Authority".

['Competent Authority and Procedure for Registration' shall be as defined in Annexure-I of Order (Public Procurement No. 4) dated 23.02.2023 issued by Ministry of Finance, Govt. of India].

Note:

- a) Tenderers are advised to note the contents of Government of India Order No. P-45021/2/2017-PP (BE-II) dated 16.09.2020, issued by the 'Department for Promotion of Industry and Internal Trade' under the Ministry of Commerce and Industry regarding Public Procurement (Preference to make in India), with all its latest amendments as on the date of 'Notice Inviting Tender' for further clarification.
 - b) Tenderers are also advised to note the contents of Government of India Office Memorandum No. P-45021/102/2019-BE-II-Part (1) (E-50310) dated 04.03.2021 issued by the 'Department of Promotion of Industry and Internal Trade' under the Ministry of Commerce and Industry, regarding clarification on local content.
 - c) Tenderers are advised to note and comply with the contents of Order (Public Procurement No. 4) dated 23.02.2023 issued by Procurement Policy Division, Department of Expenditure, Ministry of Finance, Govt. of India.
 - d) Tenderers are advised to note the contents of the contents of OM No. F.12/1/2021-PPD (Pt) dated.02-03-2021 and OM No. F.12/17/2019-PPD dtd.29-10-2020 issued by Dept of Expenditure, Ministry of Finance, Govt. of India regarding exemption of Rule 144 (xi) and applicability of Cl. 35 and 36, with respect to the subject Tender.
- 36.2 The successful Tenderer shall not be allowed to subcontract works to any Contractor from a country which shares a land border with India, to which the Govt. of India has not extended lines of credit or in which the Govt. of India is not engaged in development projects, unless such Contractor is registered with the "Competent Authority".
- 36.3 In this regard, the Tenderer shall provide a certificate as per Proforma given in 'Annexure-8'. If such certificate given by the Tenderer whose bid is accepted is found to be false, this would be a ground for immediate termination and further legal action in accordance with law.

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SECTION-III
QUALIFICATION
INFORMATION



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SECTION III: QUALIFICATION INFORMATION

- 1.0 The information to be filled in by the Tenderer hereunder will be used for purposes of Evaluation of Tenderer's Qualification as provided for in ITT Clause 3. This information will not be incorporated in the Contract.

1.1	Constitution or legal status of Tenderer	 (Attach copy)
	Agency in which Registered (with Registration No.)	 (Attach Copy)
	Principal place of business:	

	Requirement	Financial Year	Financial turnover for the year
1.2	Financial turnover in the last five years (in Rs. Crores) #	2019-20	
		2020-21	
		2021-22	
		2022-23	
		2023-24	

Note - Attach Certificate from practicing Chartered Accountant

- 1.3 Information on works which are yet to be completed and works for which Tenders have been submitted as on the date of this Tender.

(A) Existing commitments and on-going works:

Description of Work	Place & State	Contract No. & Date	Name and Address of Employer	Value of Contract (Rs. Crores)	Stipulated period of completion	Value of works remaining to be completed (Rs. Crores)	Anticipated date of completion
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

(B) Works for which Tenders already submitted:

Description of Work	Place & State	Name and Address of Employer	Estimated value of works (Rs. Lakh)	Stipulated period of completion	Date when decision is expected	Remarks if any
(1)	(2)	(3)	(4)	(5)	(6)	(7)



- 1.4 Name, address, telephone, and fax numbers of the Tenderers' Bankers who may provide references if contacted by the Employer.
-
-

- 1.5 Work performed as Prime Contractor (in the same name) on works of similar nature during the last five years counted 28 days prior to the date of submission [w.r.t. ITT clause 3.1 and 3.2]:

Project Name	Name of Employer	Description of Work	Contract Number	Value of Contract Rs. Crores	Date of issue of Work order	Specified period of completion	Actual date of completion	Remarks explaining reasons for delay in completion of work
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

- 1.6 Financial data of the tender (In case of JV, by each member) as per Annexure-6 duly certified by chartered accountant.
- 1.7 Reports on the financial standing of the Tenderer, such as profit and loss statements and Auditor's reports for the last five years;
- 1.8 Qualification and experience of the key Technical and Management personnel in permanent employment with the Tenderer and those that are proposed to be deployed on this Contract, if awarded.
- 1.9 Not Used
- 1.10 Evidence of access to financial resources to meet the qualification requirement specified in ITT Clause 3.3: Cash in hand, Letter of Credit, etc. List them below and attach certificate from the Banker in the suggested format as under:

BANKER'S CERTIFICATE

This is to certify that M/s. is a reputed company with a good Financial standing. If the Contract for this work, namely "..... (name of the work)" is awarded to the above firm, we shall be able to provide overdraft / credit facilities to the extent of Rs. to meet the working capital requirements for executing the above Contract.

Sd/-

Name of the Bank, Senior Bank Manger

Address:



1.11 Information on litigations in which the Tenderer is involved:

Employer	Other Parties	Details of dispute	Amount involved	Remarks showing present status

- 1.12 The proposed methodology and program of Works backed with equipment planning and manpower deployment, duly supported with broad calculations and Quality Control procedures proposed to be adopted, justifying their capability of execution and completion of the work as per Technical Specifications/ Scope of work within the Contract period.

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SECTION-IV FORM OF TENDER



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SECTION IV: FORM OF TENDER

NIT No: BMRCL/O&M/SIG/PMC/02

Description of Work: ANNUAL PREVENTIVE MAINTENANCE CONTRACT FOR SIGNALLING SYSTEMS INSTALLED IN REACH-5 STATIONS, HEBBAGODI DEPOT AND OCC & BCC.

To,
The ED (O&M)
Bangalore Metro Rail Corporation Ltd (O&M Wing)
Baiyappanahalli Depot, Administrative Building,
Near NGEF Signal, Old Madras Road, Baiyappanahalli,
Bangalore- 560038, Karnataka, India.

Dear Sir / Madam,

Having examined and understood the Instructions to Tenderer, General Conditions of the Contract, Special Conditions of Contract, Technical Specifications and any other documents forming part of the Tender document issued under Tender notification no ----- dated----- including any addendum /amendments, the receipt of which is hereby duly acknowledged, I/We the undersigned, hereby submit the fully completed Tender documents in duplicate, which includes the following for the said work;

- a) First Cover: EMD / Tender Security
- b) Second Cover: Qualification cum Technical Package
- c) Third Cover: Financial Package

I/We hereby agree to execute the Contract in conformity with the Specifications & Conditions of Contract enumerated in the Tender Documents, for the sum stated & quoted in the Tender or such other sums as may be ascertained in accordance with the 'Bill of Quantities' made part of the Financial Package.

We understand that you are not bound to accept the lowest or any Tender you receive.

We undertake that, in competing for (and, if the award is made to us, in executing) the above Contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

We hereby confirm that this Tender complies with the Tender validity.

We undertake, if our Tender is accepted, to execute the PMC Works in accordance with the program/Schedule of maintenance specified in the 'Scope of work and Technical Specification'.

If our Tender is accepted, we will submit the Performance Security for a sum equivalent to Three (03) percent of the Contract Price for the due performance of the Contract, in the form as prescribed in GCC clause 36.

We agree to abide by this Tender for the Tender validity period specified in Clause 13 of the ITT and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

This Tender, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

We confirm that we comply with the eligibility requirements as per ITT Clause 2 and Clause 3 of the



Tender documents.

Dated this day of 20.....

Yours faithfully,

(Signature) (in the capacity of)

Duly authorized to sign Tender for and on behalf of
"....."

(To be submitted duly printed, signed and stamped by the Tenderer on Tenderer's letter pad)

* * *
_ _ _ _



Appendix to FORM OF TENDER**1. SALIENT FEATURES OF CONTRACTS (CONTRACT DATA)**

1.	Employer's Name & Address	Bangalore Metro Rail Corporation Ltd (O&M Wing) Baiyappanahalli Depot, Administrative Building, Near NGEF Signal, Old Madras Road, Baiyappanahalli, Bangalore- 560038, Karnataka, India.
2.	Validity of Tender	120 days from the date of submission of Tenders as per ITT Clause 13.
3.	Earnest Money Deposit (EMD) (See Clause 14 of ITT)	INR 6,29,529/- (Indian Rupees Six Lakh Twenty Nine Thousand five hundred twenty nine only).
4.	Contractor's Name & Address with telephone no. and Email ID	 (To be filled in by the Tenderer)
5.	Submission of queries and pre-bid meeting, date and time of Tender Submission, Tender opening, and Place.	- As per Date and Time specified in e-Procurement Portal. Place: Office of ED (O&M) Bangalore Metro Rail Corporation Ltd (O&M Wing) Baiyappanahalli Depot, Administrative Building, Near NGEF Signal, Old Madras Road, Baiyappanahalli, Bangalore- 560038, Karnataka, India.
6.	The Work consists of	ANNUAL PREVENTIVE MAINTENANCE CONTRACT FOR SIGNALLING SYSTEMS INSTALLED IN REACH-5 STATIONS, HEBBAGODI DEPOT AND OCC & BCC.
7.	Start Date	The date of issue of 'Letter of Acceptance' (LOA) or the date specified in the 'Notice To Proceed', as the case may be.
8.	Contract period	Five (05) Years from the start date specified in "Notice to Proceed / LOA" as the case may be.
9.	The following documents form part of the Contract (See Clause 2.2 of GCC)	(1) Contract Agreement (2) Letter of Acceptance, Notice to Proceed with the works (3) Instruction to Tenderers/ Bidders (4) General Conditions of Contract (5) Special Conditions of Contract (6) Form of Tender / Bid Form (7) Technical Specifications including scope of work (8) Priced Bill of quantities (9) Drawings (10) Contractor's Proposals (11) All correspondence between the Tenderer and BMRCL from the date of issue of NIT and the date of issue of the LOA. (12) Any other document forming part of the Contract.
10.	The Site Data	All Stations of BMRCL Reach-5 section, Baiyappanahalli depot (OCC-R5), Peenya Depot (BCC-R5) and Hebbagodi depot.



11.	Amount of Performance Security (See GCC Clause 36)	10% of the Contract Value in INR. In the event of variations during the execution of the Contract which result in payments to the Contractor over and above the original Contract Price the Performance Security shall be suitably adjusted. The Performance Security shall be in the form of Demand Draft / Pay Order / Banker's cheque / Bank Guarantee shall be drawn on and payable & extendable at a designated branch in Bangalore.
12.	Penalty (See GCC Clause 45)	As per Clause 2.14 of SCC.
13.	Program (see GCC Clause 34)	Work Program shall be submitted within 15 days of issue of LOA or earlier as required by the Employer.
14.	Defect Liability Period	Not applicable
15.	Payment upon Termination – Computation of additional cost to the Employer (GCC Clause 48)	The percentage to apply to the value of the PMC work not completed representing the Employer's additional cost for completing the Works shall be 30 percent.
16.	Insurance (GCC Clause 37)	As per Clause 37 of GCC



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SECTION V: GENERAL CONDITIONS OF CONTRACT (GCC)**Table of Clauses**

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SECTION – V: GENERAL CONDITIONS OF CONTRACT**(A) General****1. Definitions:**

- 1.1 Terms which are defined in the 'Appendix to Form of Tender' are not also defined in the General Conditions of Contract but keep their defined meanings. Bold letters are used to identify defined terms.
- a. **"Appendix to Form of Tender"** is the Salient Features of Contract that defines the documents and other information which comprise the Contract.
 - b. **"Bill of Quantities"** means the priced and completed Bill of Quantities forming part of the Tender.
 - c. **"Break Down Maintenance/Corrective Maintenance"** means Emergency Maintenance activities carried out post failure.
 - d. **"Preventive Maintenance"** means periodical maintenance as per the approved periodicity and checklist.
 - e. The **"Completion Date"** is the date of completion of the whole of the Works certified by the Employer in accordance with Sub Clause 14.1 of GCC.
 - f. The **"Contract"** is the Contract between the Employer and the Contractor to execute, complete and maintain the Works. It consists of the documents listed in Clause 2.2 of GCC.
 - g. The **"PMC"** shall mean ANNUAL PREVENTIVE MAINTENANCE CONTRACT FOR SIGNALLING SYSTEMS INSTALLED IN REACH-5 STATIONS, HEBBAGODI DEPOT AND OCC & BCC.
 - h. The **"Contractor"** is a person or corporate body whose Tender to carry out the Works/Services has been accepted by the Employer. It means the person, firm or company with whom the order of the Works/Services is placed and shall be deemed to include the Contractor's successors (approved by the Employer), representatives, heirs, executors and administrators, as the case may be unless excluded by the terms of the Contract;
 - i. The **"Contractor's Tender"** is the completed Tender document submitted by the Contractor to the Employer.
 - j. The **"Contract Value"** means the price payable to the Contractor under the Contract for the full and proper performance of its Contractual obligations;
 - k. **"Days"** are calendar days; **"months"** are calendar months.
 - l. A **"Defect"** is any part of the Works not completed in accordance with the Contract.
 - m. **"Drawing"** means the drawing or drawings specified in or annexed to the specification;
 - n. The **"Employer"** or **"BMRCL"** means the Bangalore Metro Rail Corporation Limited or the person named as such in the Tender document and includes the legal successors or permitted assigns of the Employer,
 - o. **"Engineer"** means any person/party nominated or appointed from time to time by the Employer to act as the Engineer for the purposes of the Contract and notified as such in writing to the Contractor.



- p. **"Engineer's representative"** means any person nominated by Engineer with the approval of the Employer who shall exercise the authority of the Engineer to the extent notified by the Engineer.
- q. The **"Initial Contract price"** is the Contract Price listed in the Employer's Letter of Acceptance.
- r. The **"Inspecting Officer"** means any person appointed from time to time by BMRCL and notified as such in writing to the Contractor and includes his authorized representatives/ assistants.
- s. **"Letter of Acceptance"** means the letter or memorandum communicating to the Successful Tenderer the acceptance of his Tender and includes other communication modes included in the Instructions to Tenderers.
- t. **"Materials"** are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- u. **"Notice to Proceed"** means the notice issued by the Employer to the Contractor to proceed with the works at the site.
- v. **"Plant"** is any integral part of the Works which is to have a mechanical, electrical, electronic, or chemical or biological function.
- w. **Not used**
- x. The **"Project Site"** or **"Site"** means the place specified in the Contract at which any work is required to be executed by the Contractor under the Contract or any other place approved by the Employer for the purpose.
- y. **"Scheduled Maintenance/Preventive Maintenance"** means Scheduled Maintenance activities carried out as indicated in the scope of works.
- z. **"Signed"** includes stamped, except in the case of acceptance of Tender or any amendment thereof;
- aa. **"Specification"** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Employer.
- bb. The **"Start Date"** shall be the date of issue of 'Letter of Acceptance' (LOA) or the date specified in the 'Notice to Proceed', as the case may be.
- cc. The **"Stipulated Completion Date"** is the date on which it is intended that the Contractor shall complete the Works. The Stipulated Completion Date is specified in the 'Appendix to Form of Tender'. The Stipulated Completion Date may be revised only by the Employer by issuing an extension of time.
- dd. A **"Subcontractor"** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.
- ee. **"FMC"** means Fault Management Controller in Operation Control Centre (OCC).
- ff. A **"Variation"** is an instruction given by the Employer which varies the Works.
- gg. **"Works"** means all the Works, Services, supply of Materials that required for execution of the complete Scope of works in accordance with Technical specifications & Scope of works and as defined elsewhere in the Contract.



hh. "Equipment" means equipment, machinery, systems, sub-systems, etc. which has either or all of Mechanical /Electrical /Electronic functions.

ii. OCC means Operation Control Centre (OCC).

2. Interpretation:

- 2.1 In interpreting these General Conditions of Contract & Special Conditions of Contract, singular also means plural, male also means female or neutral, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. "Tender" / "Tendering" / "Tenderer" shall also mean "Bid" / "Bidding" / "Bidder". "Offer" also mean Tender / Bid.
- 2.2 The documents forming the Contract shall be interpreted in the following order of priority:
- (1) Contract Agreement
 - (2) Letter of Acceptance/Notice to Proceed
 - (3) Bill of Quantities (Pricing Document)
 - (4) Technical Specifications and Scope of Work
 - (5) Drawings
 - (6) Special Conditions of Contract
 - (7) General Conditions of Contract
 - (8) Contractor's Proposal and
 - (9) Any other document listed as forming part of the Contract.

3. Law governing Contract:

- 3.1 The law governing the Contract is the Laws of India supplanted by the Karnataka Local Acts.

4. Employer's decisions:

- 4.1 Except where otherwise specifically stated, the Employer will decide Contractual matters between the Employer and the Contractor.

5. Delegation:

- 5.1 The Employer may delegate any of his duties and responsibilities to other people after notifying the Contractor and may cancel any delegation after notifying the Contractor.

6. Communications:

- 6.1 Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act).

7. Subcontracting:

- 7.1 The Contractor shall not subcontract the Contract without the approval of the Employer in writing, subject to condition as specified in Clause 3 of Special Conditions of Contract. Subcontracting does not alter the Contractor's obligations.

8. Other Contractors:

- 8.1 The Contractor shall cooperate and share the Site with other Contractors, public authorities, utilities, and the Employer.

9. Personnel:

- 9.1 The Contractor shall, unless otherwise provided in the Contract, make his own arrangements



for the engagement of all staff and labour, local or other, and for their payment, Local conveyance, Lodging, Boarding, Travel etc.

- 9.2 The Contractor shall employ the technical personnel / Experts (Local) as detailed under special conditions of contract stipulated by BMRCL for execution of the work. The technical staff so employed shall be available at headquarters as may be stipulated by the Employer.
- 9.3 If the Employer asks the Contractor to remove a person who is a member of the Contractor's staff or his work force stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.
- 9.4 Ensure that trained personnel in the Headquarters shall always be available (24 hrs x 365 days) for emergency and on the spot fault rectification of the signalling assets under the scope.
- 9.5 The Contractor shall ensure that the persons deployed are well trained and well qualified for the assigned task and shall take necessary instructions from the Signalling Department of BMRCL, for round the clock deployment of trained personnel. Qualification and experience of Contractor's personnel engaged for execution of work are detailed in special conditions of contract. Contractor shall ensure compliance of all statutory provisions and labour laws.
- 9.6 The Contractor shall have to engage trained personnel preferably having knowledge of Kannada language.
- 9.7 Compliance with Labour Regulations
- 9.7.1 The Contractor shall, if required by the Employer, deliver to the Employer a return in detail, in such form and at such intervals as the Employer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Employer may require.

10. Employer's and Contractor's risks:

- 10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. Employer's risks:

- 11.1 The Employer is responsible for the excepted risks which are:
 - (a) Rebellion, riot commotion or disorder unless solely restricted to employees of the Contractor or his Subcontractors arising from the conduct of the Works; or
 - (b) A cause due solely to the design of the Works, other than the Contractor's design; or
 - (c) Any operation of the forces of nature (if occurs on Site) which an experienced Contractor:
 - (i) Could not have reasonably foreseen; or
 - (ii) Could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures;
 - (A) Prevent loss or damage to physical property from occurring by taking appropriate measures or
 - (B) Insure against such loss or damage.

12. Contractor's risks:

- 12.1 All risks of loss or damage to physical property and personal injury and death which arise during and in consequence during the execution of the Contract other than the excepted risks



are the responsibility of the Contractor.

13. Contractor to execute the Works:

- 13.1 The Contractor shall execute the whole and every part of the PMC work in optimum professional manner with regards to materials and otherwise in every respect in strict accordance with the Contract, site requirements & instructions of the Engineer. The Contractor shall comply with the provisions of the Contract with the care & due diligence, shall execute and maintain the installations, provide all labour, materials, tools and plants in so far as necessary for providing these or as inferred from the Contract. The Contractor shall take full responsibility for adequacy, suitability and safety for all methods of the works.
- 13.2 The Contractor shall execute the PMC Works in accordance with the Scope of Work.
- 13.3 The Contractor shall replace all the spare parts and materials which are worn out or become defective during the Contract period without any extra cost to Employer. The contractor shall submit root cause analysis of the failure. Further contractor shall note that the reason for failure should not be attributable to contractor for arranging payment.

14. Completion of PMC Works:

- 14.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the program submitted by the Contractor, as updated with the approval of the Employer.

15. Safety and Security Measures:

- 15.1 The Contractor shall be responsible for the safety of all activities on the project site during the PMC work.
- 15.2 It shall be the entire responsibility of the Contractor to adopt all the safety measures & deploy only those personnel during maintenance of the equipments under PMC, who are adequately trained with safety aspects. If any accident occurs due to wrong operations during maintenance or due to negligence on the part of the Contractor's personnel, it shall be the full responsibility of the Contractor. In case by the negligent act of the Contractors or officials of Contractor, if there is loss / damage to BMRCL property, the Contractor will be solely responsible. BMRCL reserves the right to recover such amount along with damage from the bills of Contractor or through legal proceedings. Employer's decision in this regard will be final and binding.
- 15.3 Security arrangements for the work shall be in accordance with general requirements and the Contractor shall confirm to such requirements and shall be held responsible for the action or inaction on the part of his staff, employees.
- 15.4 The Contractor's employees and representatives shall wear safety/protection wear as required at site.

16. Access to the Site:

- 16.1 The Contractor shall allow the Employer and any person authorized by the Employer access to the Project site, to any place where PMC work in connection with the Contract is being carried out.

17. Instructions:

- 17.1 The Contractor shall carry out all instructions of the Employer which comply with the applicable laws where the project site is located.
- 17.2 BMRCL shall have the right to make Minor Alterations/ Additions/ Substitutions in the



specifications or in the Scope of Work or issue instructions that may be deemed necessary during the period of the Contract and Contractor shall carry out the work in accordance with the instructions which may be given to him by BMRCL's representative.

18. Sufficiency of Tender:

- 18.1 The Contractor shall be entirely responsible for sufficiency of Prices accepted by him.
- 18.2 The Contractor shall be paid for only at quoted/accepted Prices for the activities given in the Specifications/ Scope of work.
- 18.3 The Contractor shall be deemed to have satisfied himself before bidding as to the correctness and sufficiency of his bid for the works and of the rates and prices quoted in the Bill of Quantities which rates and prices shall except as otherwise provided, cover all his obligations under the Contract and everything necessary for the proper completion and maintenance of the works, if required, Contractor shall obtain clearances from concerned local authorities at his cost. The cost of any item for which contractor has failed to enter rate shall be deemed to be covered by other rates entered in the Bill of Quantities. The Contractor shall also co-ordinate with any other agency working in the same project, compare plans, specifications and the time schedules and so arrange his work that there will be no interference. BMRCL shall entertain no claim on this account.

19. Contractor's Office:

- 19.1 The Contractor shall establish an office in Bangalore in consultation with the In-charge for planning, co-ordination and monitoring the progress of the Work and intimate the same in writing to In-charge. In addition, the Contractor may set up field offices at convenient and approved locations for co-ordination and for monitoring the progress of fieldwork at his own cost.
- 19.2 The Maintenance staff deployed for the maintenance activities should be qualified and trained in the relevant work with valid competency certificate issued by the Contractor and has the knowledge of safety procedures. The Personnel deployed shall be covered with all statutory requirements at the cost of the Contractor.

20. Noise and Disturbance / Pollution:

- 20.1 All works shall be carried out without unreasonable noise and disturbance. The Contractor shall indemnify and keep indemnified the Employer from and against any liability for damages on account of noise or other disturbance created while carrying out the work, and from and against all claims, demands, proceedings, damages, costs, charges, and expenses, whatsoever, in regard or in relation to such liability.
- 20.2 Subject and without prejudice to any other provision of the Contract and the law of the land and its obligation as applicable, the Contractor shall take all reasonable precautions.

21. Supply of Materials, Tools & Plant and Equipment:

- 21.1 No material, tools, machinery, plant and equipment shall be supplied by the Employer except as mentioned in the Tender Document. The Contractor shall arrange all tools, equipment as well as cleaning reagents and consumables required for the work. Details of Consumables/Spares to be arranged by the contractor are listed in Section VIII Clause 3 & 4.
- 21.2 If any local associates are engaged by the Contractor, the Contractor shall ensure that they have the required capabilities to keep the equipment in good condition.
- 21.3 The Contractor shall use the consumables as per the specifications given by the Employer.



22. Use and Care of Site:

- 22.1 The Contractor shall not demolish, remove or alter structures or other facilities on the site without prior approval of the Employer.
- 22.2 All garbage/debris shall be removed from site at regular intervals and also after carrying out any maintenance activities. All garbage/debris shall be disposed to the approved locations. The necessary materials required i.e. cartoons/ dustbins, etc. to be provided by the Contractor at his cost. The transportation for disposing the debris shall also be arranged by the Contractor. The disposal of waste shall be carried in sealed condition without affecting the Environment.
- 22.3 All Electrical and Electronic equipments shall be cleaned under the supervision of an authorized representative of BMRCL.
- 22.4 The Contractor shall clean only those areas of the Electrical / Electronic & other specified equipments which are either mentioned in the specifications or are permitted by the Employer or mentioned by the authorized representative of the Employer. Cleaning of equipments shall be as per the contract conditions or as required for maintaining the equipments in scope of this contract.

23. Housing Facilities:

- 23.1 The Contractor shall make his own arrangements for housing, boarding / lodging facilities for his staff / engineers.

24. Supply of Water and Electricity:

- 24.1 The Employer shall arrange for Water and Electricity supply necessary for the Works.
- 24.2 The Contractor shall make his own arrangements to extend the Electricity from the nominated sockets / points. The Contractor shall extend the Electricity as per IE Rules & IE Act (Latest) duly following all safety precautions.
- 24.3 The Contractor shall submit the planned requirement of Electricity & water. If requirements mention is beyond the capacity of the Employer, in that case the Contractor shall make his own arrangements / alternative arrangements.
- 24.4 The Contractor should make his own arrangements to draw the water from the available water point to the working place in such a manner without affecting the premises.
- 24.5 Not Used.

25. Access Roads:

- 25.1 Existing roads and other public roads may be used by the Contractor to carry out required maintenance activities, with prior approval of the Competent Authority.
- 25.2 The Contractor shall repair any damage to the road or bear the cost thereof due to movement of Contractor's plants and equipment, vehicles, etc. to the specifications and satisfaction of the Employer.

26. Maintenance instructions and checklists:

The Contractor shall follow the Operation and Maintenance instructions, Metro Railway General Rules, Standard Operating Procedures and formats/check sheets provided by the Engineer.

27. Maintenance Records:

Contractor will have to maintain proper records of All Maintenance activities as per direction of the Engineer.

The contractor shall organise a suitable solution for execution of work and to apprise the officers of BMRCL for the works carried out covering the following functional requirements:

- a. Generation of job card for all any maintenance and seeking request of power block.
- b. Maintain equipment history records of equipment (maintenance carried out)
- c. Mechanism to accept complaints from Engineers/FMC (Fault Management Controller)
- d. Each team member should have access for maintenance manuals.
- e. Modalities of submitting photos as proof of maintenance activity along with job card.
- f. Maintaining records of Stores like stock available, issue register, in-register, consumable register.
- g. Roster and attendance.
- h. Submission of maintenance reports to BMRCL officials.
- i. BMRCL in-charge or in-charges, responsible for planning, co-ordination and monitoring the progress of the work shall have rights to access the software to inspect/examine/scrutinize all the above records.

28. Taxes and duties:

- 28.1 The Contract Price shall be inclusive of all applicable Taxes, Cess & Duties, exclusive of CGST & SGST. BMRCL shall pay the applicable CGST & SGST as applicable as per Laws. The Contract price also includes handling, installation, royalties & any other charges leviable and payable by the Contractor to the authorities and including Tax to be deducted at source as defined below.
- 28.2 The Contractor shall ensure full compliance with tax laws of India with regard to this Contract and shall be solely responsible for the same. He shall submit copies of acknowledgements evidencing filing of returns every year and shall keep the Employer fully indemnified against liability of tax, interest, penalty, etc. of the Contractor's in respect thereof, which may arise.
- 28.3 **Income Tax deduction:**
Income tax (TDS) shall be deducted as per the prevailing rate and remitted to the Income Tax authorities and Form 16 shall be furnished to BMRCL in proof of remittance to IT Department. For availing lower deduction of Income Tax, necessary certificate for each financial year issued by the Income Tax Authority shall be furnished by the Contractor, failing which IT at the maximum rate will be deducted.
- 28.4 The Contractor shall be responsible to fulfil all statutory liabilities, if any towards his staff such as payment of minimum wages, PF, ESI, insurance and any other dues, etc. including all amendments issued by the Govt. from time to time. Being a Principal Employer, BMRCL may ask to submit documents in original.

29. Possession of the Site:

Contractor can take up Scheduled and support for corrective maintenance activities with BMRCL's permission as and when required.

30. Annual Maintenance:

- 30.1 The Contractor shall prepare and submit his detailed work programme, as per the scope of work detailed in the Technical Specifications.



- 30.2 The Contract period shall be as stated in 'Appendix to Form of Tender'. However, the work should be started within 7 days from the issuance of NTP / letter notifying the commencement of work. The Employer at its discretion or due to insufficient maintenance may terminate the Contract at any point of time.
- 30.3 The Contractor should be capable to work round the clock. The maintenance activities may have to be done during non-operational hours of above plants & equipments, time for which will be intimated to the Contractor.

31. Extension of the Time for Completion:

- 31.1 The Employer shall extend the Time for Completion of the works, if any work is pending at the end of the Contract period.
- 31.2 The Contract period may be extended further by the Employer at his discretion. During extension of contract period Employer and contractor shall discuss to finalise the extension terms and conditions.
- 31.3 The Employer shall decide the extension period of the contract and communicate to the contractor 60 days prior to the completion date of contract. Within 21 days from the date mentioned in the letter, contractor shall submit the proposal with the mutually agreed terms and conditions.

32. Advances

- 32.1 No advances shall be paid to the Contractor.

33. Price Variation Clause

- 33.1 Price variations clause is not applicable in this Contract.

(B) Time Control**34. Program**

- 34.1 Within the time stated in the 'Appendix to Form of Tender', the Contractor shall submit a proposal to the Employer for approval of Plan indicating the general methods, arrangements, order, and timing for all the activities. Proposal shall be submitted within 15 days from the date of issue of LOA or earlier as required by the Employer.
- 34.2 The Employer's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Plan and submit it to the Employer again at any time. A revised Plan shall mention the effect of Variations.

35. Delays ordered by the Employer

- 35.1 The Employer may instruct the Contractor to delay the start or progress of any activity within the Works. However, no monetary claims whatsoever shall be paid to the Contractor or entertained on this account.

36. Performance Security / Security Deposit

- 36.1 Within 15 days of receipt of notification communicated by the Employer by issue of "Letter of Acceptance", the Contractor shall furnish a Performance Security (including additional security for unbalanced Tenders, if required) for an amount as specified in **Appendix to Form of Tender (Section IV)** in one of the following forms:
- (a) A crossed Demand Draft / Pay Order / Banker's cheque in favour of the "**Bangalore Metro Rail Corporation Ltd.**" from an Indian Scheduled Bank (excluding Cooperative



Banks) or from a Scheduled Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with Second Schedule, **payable at Bangalore.**

Or

- (b) An irrevocable Bank Guarantee issued from an Indian Scheduled Bank (excluding Cooperative Banks) or from a Scheduled Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with Second Schedule drawn on and **payable & extendable at a designated branch in Bangalore** in the Form given in **Proforma-B of Section-IX** to the Tender documents. However, 'Performance Security' Bank Guarantee format is also available in <http://tender.bmrc.co.in:90>.

In case furnishing of an acceptable Performance Security is delayed by the Contractor beyond the period provided in GCC clause 36.1, the Employer may debar the Tenderer from participating in any tender of BMRCL for a period of Two (02) years and forfeit the tender security /EMD in accordance with ITT clause 14.8.

- 36.2 The Employer shall be entitled and it shall be lawful on his part to forfeit the amount of the Performance Security in whole or in part in the event of any default, failure or neglect on the part of the Contractor in the fulfilment or performance in all respects of the Contract under reference or any other Contract with the Employer.

The employer shall also be entitled to deduct from the amount of the Performance Security any loss or damage which the Employer may suffer or be put by reason of or due to any act or other default, recoverable by the Employer from the Contractor in respect of the Contract under reference or any other Contract

On occurrence of either of aforesaid events, the Employer shall call upon the Contractor to maintain the amount of the Performance Security as its original limit by furnishing fresh Bank Guarantee of additional amount, provided further that the Employer shall be entitled to recover any such claim from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contracts with the Employer.

- 36.3 The Performance Security shall remain in full force and effect from the date of commencement of Contract up to six (6) months beyond the Date of Expiry of the Contract Period. This shall be suitably extended by the Contractor if all Contractual Obligations are not completed by the Contractor. Before the expiry of the date of validity of the Performance Security, the Contractor on being called upon by the Employer from time to time shall obtain from the Guarantee Bank, extension of time for validity thereof for a period of six months, on each occasion. The extension or extensions aforesaid, executed on non-judicial stamp paper of appropriate value must reach the Employer at least thirty days before the date of expiry of the Performance Security on each occasion.
- 36.4 As and when an amendment is issued to the Contract, the Contractor shall, within 15 days of the receipt of such an Amendment furnish to the Employer an amendment to the Performance Security rendering the same valid for the Contract as amended and up to 6 months beyond amended Contract period. All expenses of this shall be borne by the Contractor.
- 36.5 The Performance Security and or any amendment thereto shall be executed on a non-judicial stamp paper of requisite money value in accordance with the laws of the country in which the same is/are executed by the party competent to do so.
- 36.6 If the Contractor, having been called upon by the Employer to furnish Performance Security fails to furnish the same, it shall be lawful for the Employer:



- i) to recover from Contractor, the amount of Performance Security by deducting the amount from the pending bills of the Contractor under any Contract with the Employer or the government or any other person Contracting through the Employer or otherwise however, OR
- ii) to cancel the Contract or any part thereof and to execute or authorize to execution of the Works at the risk and cost of the Contractor and in that event the provisions of Clause 47 & 48 shall apply as far as applicable.

36.7 Release of Performance Security:

Subject to satisfactory completion of the entire work as per the scope of work under this contract, the Performance Security shall be released to the Contractor after the expiry of the contract period/Duration of Liability as described in the General Conditions of the Contract and respective Special Conditions of the Contract and issue of Performance certificate from the Employer to the Contractor.

37. Insurance

37.1 Insurance to be taken for the PMC period by the Contractor

The Contractor shall at its expense take out and maintain in effect, or cause to be taken out and maintained in effect, during the performance of the Contract, the insurances set forth below in the sums and with the deductibles and other conditions specified. The identity of the Insurers and the form of the policies shall be subject to the approval of the Employer, who shall not unreasonably withhold such approval.

i. Third Party Liability Insurance:

Covering bodily injury or death suffered by third parties (excluding the Employer's Personnel) and loss of or damage to property (excluding the Employer's property) occurring in connection with and during the maintenance period (PMC) of 05 years:

Sum Insured Amount (in currency(ies))	Deductible limits (in currency(ies))	Parties insured (Names)	From (Place)	To (Place)

Such Insurance Policy shall be taken out by the Contractor at its expense and maintained in effect, or cause to be taken out and maintained in effect, during the performance of the Contract (PMC period). Indemnity limit of such Insurance shall be taken out for 10% of the Contract value (aggregate contract value for the 05 Years) subject to a maximum value of Rs. 60 Crore [AOA & AOY]. The Insurance so taken and maintained can be on year-to-year basis for the Contract period or for the entire period of the PMC Contract, at the discretion of the Contractor.

ii. Insurance for contractor's personnel - Employees Compensation Insurance Policy

The Contractor shall effect and maintain insurance against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury, sickness, disease or death of any person employed by the Contractor or any other of the Contractors personnel.

The Insurance shall cover the Employer and the Engineer against liability for claims, damages, losses and expenses (including legal fees and expenses) arising from injury,



sickness, disease or death of any person employed by the contractor or any other of the Contractor's personnel, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Employer or of the Employer's Personnel.

The Insurance shall be maintained in full force and effect during the whole time that these Personnel are assisting in the execution of the works. For a Sub-contractor's Employees, the Insurance may be effected by such Sub-Contractor but the Contractor shall be responsible for compliance with this clause.

The policy shall be:

- i) In the joint names of the Employer (Principal) and Contractor;
- ii) For Total Wages of Workers;
- iii) Cover all the workmen of the Contractor;
- iv) In force till the completion of the project/contract;
- v) Include cover for medical expenses incurred on account of an accident or injury sustained by the workmen in the course of and during the employment;
- vi) Include cover for Liability as per Fatal Accidents Act and Common Law.

The Sub-Contractor while taking the Insurance shall include Employer (Principal) and the Contractor's name and cover for the total wages of workers engaged by them. Such Insurance shall include cover for medical expenses incurred on account of an accident or injury and shall also include cover for Liability as per Fatal Accidents Act and Common Law. The Contractor shall be responsible in collecting the Insurance Policy from the Sub-Contractor and submit the same to the Employer.

37.2 Policies and certificates for insurance shall be delivered by the Contractor to the Employer for his approval before the Start Date. All such insurance shall provide for compensation to be payable to rectify the loss or damage incurred. All payments received from insurers relating to loss or damage shall be held jointly by the Parties and used for the repair of the loss or damage or as compensation for loss or damage that is not to be repaired.

37.3 If the Contractor fails to effect or keep in force any of the insurances referred to in the previous sub-clauses or fails to provide satisfactory evidence, Policies or receipts, the Employer may without prejudice to any other right or remedy, effect Insurance for the cover relevant to such default and pay the premiums due and recover the same as a deduction from any other monies due to the Contractor. If no payment is due, the payment of the premiums shall be a debt due.

37.4 Alterations to the terms of Insurance shall not be made without the approval of the Employer.

37.5 Both Parties shall comply with any conditions of the insurance policies.

38. Suspension of work

38.1 The Engineer may at any time instruct the contractor to suspend progress of Part or all of the works. During suspension, the contractor shall protect, Store and secure such part or whole of the works against any deterioration, Loss or damage.

38.2 Consequences of Suspension

The Contractor shall not be entitled to extra cost (if any), incurred by him, during the period of suspension of work, if such suspension is

- a) Provided in the Contract, or



- b) Necessary for proper execution of works or by reasons of weather condition or by some default on the part of the contractor, or
- c) Necessary for the safety of works or any part thereof or
- d) Necessary for the safety of adjoining public or other property or safety of the public or workmen or those who have to be at the site or
- e) To ensure safety and to avoid disruption of traffic and utilities, as also to permit fast repairs and restoration of any damaged utilities, or
- f) Due to instructions of any other statutory authority.

If suspension is ordered by the Engineer for reasons other than those mentioned in Sub-clause 38.2 then the Contractor's entitlement is mentioned in table below:

Suspension Period	Extension of Time	Compensation for the suspension period	Remarks
Upto 14 days	No	No	Employer may, at his sole discretion, give extension of time in exceptional circumstances.
15-30 days	Yes	No	Extension of time as considered proper by the Employer
Above 30 days	Yes	• As per Daily rate of wages for idle labour/employees	Compensation as assessed by the Employer for entire suspension period on submission of documentary proof by the contractor to Engineer's satisfaction.

38.3 Resumption of Work

After receipt of permission or of an instruction to proceed, the contractor shall, after notice to the Engineer, and together with the Engineer, examine the Works, Plants, Systems and Materials affected by the suspension. The contractor shall make good any deterioration or defect in or loss of the works, Plants, Systems and Materials, which has occurred during the suspension.

(C) Quality Control

39. Inspections and Tests

- 39.1 The Employer or its representative shall have the right to inspect and/or to test the materials or works of the PMC to confirm their conformity to the Contract specifications at no extra cost to the Employer. Special Conditions of Contract and the Technical Specifications/ Scope of Work shall specify what inspections and tests the Employer requires and where they are to be conducted. The Employer shall notify the Contractor in writing in a timely manner of the identity of any representatives retained for these purposes.
- 39.2 Should any inspected or tested materials fail to conform to the specifications, the Employer may reject the materials or Works and the Contractor shall either replace the material rejected materials or make alterations /rectifications necessary to meet specification requirements free of cost to the Employer.
- 39.3 The Employer's right to inspect test and, where necessary, reject the materials or Works at Project Site shall in no way be limited or waived by reason of the materials or Works having



previously been inspected, tested and passed by the Employer or its representative prior to the dispatch of the materials.

39.4 Identifying defects

The Employer shall check the Contractor's work or in the course of the service of the system and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Employer may instruct the Contractor to rectify any defects found in their work.

39.5 Correction of defects during Defect Liability period

Not Applicable

39.6 Uncorrected defects

If the Contractor has not corrected a Defect within the time specified in the Employer's notice, the Employer will assess the cost of having the Defect corrected, and the Contractor will pay this amount or will be recovered from any monies due to the Contractor from the Employer including Performance Security.

39.7 Nothing in GCC Clause 39 shall in any way release the Contractor from any warranty or other obligations under this Contract.

(D) Cost Control

40. Bill of Quantities (BOQ)

40.1 The 'Bill of Quantities' contains items for the PMC to be carried out by the Contractor.

41. Variations

41.1 The Employer shall have power to order the Contractor to do any or all of the following as considered necessary or advisable during the progress of the work by him

- (a) Increase or decrease of any item of work included in the Bill of Quantities (BOQ);
- (b) Omit any item of work;
- (c) Change the character or quality or kind of any item of work;
- (d) Change the levels, lines, positions and dimensions of any part of the work;
- (e) Execute additional items of work of any kind necessary for the completion of the works; and
- (f) Change in any specified sequence, methods or timing of PMC of any part of the work.
- (g) Extend or reduce the contract period

41.2 The Contractor shall be bound to carry out the PMC work in accordance with any instructions in this connection, which may be given to him in writing by the Employer and such alteration shall not vitiate or invalidate the Contract.

41.3 Variations shall not be made by the Contractor without an order in writing by the Employer, provided that no order in writing shall be required for increase or decrease in the quantity of an item appearing in Schedule B so long as the work executed conforms to the approved drawings.

41.4 The Contractor shall not make any alteration and/or modification of the Works, unless and until the Engineer instructs or gives consent to a Variation.

If the PMC activities are not in accordance with the Contract, these activities shall not



constitute a Variation.

42. Payments for Variations

- 42.1 Payment for increase /decrease up to 25% of the total contract value can be made by the employer provided in the Bill of Quantities shall be made at the rates quoted by the Contractor.
- 42.2 If the rates for additional, substituted or altered item of PMC work cannot be determined as at 42.1, above, the Contractor shall be requested to submit his quotation for the items supported by analysis of the rate or rates claimed, within 7 days. Then rate shall be worked out by BMRCL as stipulated in respective Special Conditions of Contract.
- 42.3 If the Contractor's quotation is determined unreasonable, the Employer may order the Variation and make a change to the Contract Price which shall be based on Employer's own forecast of the effects of the Variation on the Contractor's costs, as per respective Special Conditions of Contract, which shall be binding on the Contractor.
- 42.4 Under no circumstances the Contractor shall suspend the PMC work on the plea of non-settlement of rates for items falling under this Clause. If any disputes, that may be settled in the manner laid down under GCC clause 51 and respective Special Conditions of Contract.

43. Submission of Bills for Payment

- 43.1 Payment to the Contractor shall be made by BMRCL against **Quarterly bills** for the work done against this Contract. The payment shall be made after deducting any amounts due from the Contractor by way of mobilization advance, taxes, Security deposit, penalties/recoveries if any etc. The Contractor should ensure that all employees are covered for all social benefits viz PF, EPS, EDLI and ESI. The Contractor shall submit proof of recovery and remittance of the same along with the quarterly bill for the next quarter. An indemnification covering BMRCL shall be submitted against any claim during the execution of the Contract or later stage under Employees Provident Fund and Workmen Compensation Act before release of payment of First Bill.
- 43.2 The Contractor shall submit to the Employer Quarterly Bills of the value of the PMC work completed less the cumulative amount paid previously.
- 43.3 The Employer shall check the Contractor's bill and determine the value of the work executed which shall comprise of;
 - (i) value of the quantities of the items in the BOQ completed and
 - (ii) valuation of Variations.
 - (iii) Based on performance as detailed in Special conditions of contract.
- 43.4 The Employer may exclude any item paid in a previous bill or reduce the proportion of any item previously paid in the light of later information.

44. Payments

- 44.1 Payments shall be adjusted for deductions for advance payments, if any, other recoveries in terms of Contract and taxes due to be deducted at source, as applicable under the law. The Employer shall pay the Contractor within 30 days of submission of complete and valid Bill without any deficiency. The Contractor shall be liable to pay Penalty for shortfall in progress.
- 44.2 Items of the Works for which no rate or price has been entered in will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.



- 44.3 The cost of all, Materials & Consumables shall be borne by the Contractor.
- 44.4 The Contractor shall supply/arrange all skilled man-power for carrying out Breakdown/ Corrective Maintenance within the agreed contract cost.
- 44.5 Whenever transportation or handling is needed, the Contractor shall arrange the same at his own cost.
- 44.6 For any deficiency or defective service, an amount, as per the SCC clause 2.13, **Terms of Payment** shall be deducted from the quarterly payment made to the contractor. The decision of Engineer shall be final in this regard.
- 44.7 Due payment after completion of each quarter after making any recoveries etc. towards taxes, duties & non-performance as described elsewhere in the contract shall be made to the Contractor. No payment to the Contractor shall be released till the Contractor submits the bill for the work done by him.
- 44.8 Proportionate payment shall be deducted from the Contractor's bill if any work is found to be not done/is incomplete or is unsatisfactory, as adjudged by the Engineer (HoD). In case of any difference of opinion between the Engineer and the Contractor, regarding the non-performance or unsatisfactory performance of work, the matter will be referred to the Executive Director/Director, BMRCL, whose decision on the matter shall be final. BMRCL may also, at their discretion get such defective/deficiency work done at the risk & cost of the contractor and recover the actual amount spent plus 20% of actual spent amount including all actual BMRCL establishment charges, from the Contractor's bills. Repeated lapses in doing the work satisfactorily shall result in rescinding the Contract as described in GCC Clause 47.

45. Penalty:

- 45.1 The Contractor shall pay Penalty to the Employer at the rates stated in the 'Appendix to Form of Tender'. The Employer may deduct Penalty from payments due to the Contractor. Payment of Penalty does not affect the Contractor's liabilities.
- 45.2 This penalty shall not relieve the Contractor from his obligation to execute the works or from any other of his obligations and liabilities under the contract. The decision of BMRCL regarding levy of penalty shall be final and binding.

46. Cost of repairs

Loss or damage to the Equipment or Materials to be incorporated between the Start Date and the end date shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

(E) Finishing the Contract**47. Termination**

- 47.1 The Employer may terminate the Contract if the other party causes a fundamental breach of the Contract.
- 47.2 Fundamental breaches of Contract include, but shall not be limited to the following:
- (a) the Contractor stops work for 7 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Employer;
 - (b) the Contractor becomes bankrupt or goes into liquidation other than for a reconstruction or amalgamation;



- (c) the Employer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within three (3) days of receipt of notice of failure from BMRCL or within such further time period as BMRCL may have subsequently approved in writing;
- (d) the Contractor does not maintain safety and security which is required;
- (e) the Contractor has delayed the completion of works by the number of days for which the maximum amount of Penalty can be paid as defined in the 'Appendix to Form of Tender'; and
- (f) if the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in the executing the Contract.
- (g) If the Contractor has, without reasonable excuse, or has suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Employer (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven (7) days from the Employer.
- (h) If the Contractor persistently neglects to carry out his obligations under the Contract and/or commits default in complying with any of the terms and conditions of the Contract and does not remedy it or take effective steps to remedy it within seven (7) days after a notice in writing is given to him in that behalf by the Employer.
- (i) If the Contractor having been given a notice by the Employer in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or unprofessional manner shall omit to comply with the requirements of such notice for a period of seven (7) days thereafter.
- (j) If the Contractor assigns, transfers, sublets or otherwise parts with or attempts to assign, transfer sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Employer.

47.3 When the Contractor has made himself liable for action under any of the cases aforesaid, the Employer shall have powers:

- (a) To determine or withdraw the Contract as aforesaid (of which termination or rescission notice in writing to the Contractor under the hand of the Employer shall be conclusive evidence). Upon such determination or rescission, the full security deposit recoverable under the Contract shall be liable to be forfeited. If any portion of the Security Deposit has not been paid or received it would be called for and forfeited.
- (b) To employ labour and to supply materials to carry out the work or any part of the work debiting the Contractor with the cost of the labour and the price of the materials (of the amount of which cost and price certified by the Employer shall be final and conclusive) against the Contractor and crediting him with the value of the work done in all respects in the same manner and at the same rates as if it has been carried out by the Contractor under the terms of his Contract. The Certificate of the Employer as to the value of the work done shall be final and conclusive against the Contractor provided always that action under the sub clause should only be taken after giving notice in writing to the Contractor. Provided also that if the expenses incurred by the Employer are less than the amount payable to the Contractor at his agreement rates, the difference shall not be paid to the Contractor.



- (c) After giving notice to the Contractor to measure up the work of the Contractor and to take such whole, or the balance or part there of as shall be unexecuted out of his hands and to give it to another Contractor to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to the original Contractor if the whole work had been executed by him (of the amount of which excess the certificate in writing of the Employer shall be final and conclusive) shall be borne and paid by the original Contractor and may be deducted from any money due to him by the Employer under his Contract or on any other account what so ever or from his security deposit or the proceeds of sales there of or a sufficient part thereof as the case may be. If the expenses incurred by the Employer are less than the amount payable to the Contractor at his agreement rates, the difference shall not be paid to the Contractor.
- (d) Any excess expenditure incurred or to be incurred by the Employer in executing the PMC works or part of the works or the excess loss or damages suffered or any may be suffered by the Employer as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to the Employer in law be recovered from any monies due to the contractor on any account and if such monies are not sufficient, the Contractor shall be called upon in writing and shall be liable to pay the same within thirty (30) days.
- (e) If the Contractor shall fail to pay the required sum within the aforesaid period of thirty (30) days, the Employer shall have the right to sell any or all of the Contractor's unused materials etc. and apply the proceeds of sale thereof towards the satisfaction of any sums due from the Contractor under the Contract and if thereafter, there be any balance outstanding from the Contractor, it shall be recovered in accordance with the provision of the Contract.
- 47.4 In the event of any one or more of the above courses being adopted by the Employer the Contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of Contract, and in case action is taken under any of the provision aforesaid, the Contractor shall not be entitled to recover or be paid any sum for any work thereof, or actually performed under this Contract unless and until the Employer has certified in writing the performance of such work and the value to be paid as certified.
- 47.5 Provided further that if any of the recoveries to be made, while taking action as per 47.3(b) and/or 47.3(c) above, are in excess of the security deposit forfeited, these shall be limited to the amount by which the excess cost incurred by the Employer exceeds the Security Deposits forfeited.
- 47.6 When either party to the Contract gives notice of a breach of Contract to the Employer for a cause other than those listed under GCC sub-clause 47.2, the Employer shall decide whether the breach is fundamental or not.
- 47.7 If any information furnished by the Contractor is found to be incorrect at any time, the Contract is liable to be terminated forth with and the security deposit is liable to be forfeited by the Employer.
- 47.8 Notwithstanding the above, the Employer may terminate the Contract for convenience. No Compensation whatsoever will be admissible on this account.
- 47.9 If the Contract is terminated, the Contractor shall stop PMC work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.



- 47.10 All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Employer, if the Contract is terminated because of a Contractor's default.

48. Payment upon Termination

- 48.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Employer shall prepare bill for the value of the work done less advance payments received up to the date of the bill, less other recoveries due in terms of the Contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in the 'Appendix to Form of Tender'. Additional Penalty shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.
- 48.2 If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Employer shall prepare bill for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the Contract, and less taxes due to be deducted at source as per applicable law and make payment accordingly.

49. Release from Performance

- 49.1 If the Contract is frustrated by any event entirely outside the control of either the Employer or the Contractor, the Employer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.

(F) OTHERS

50. Force Majeure

- 50.1 Notwithstanding the provisions of GCC Clauses 31, 34 and 35 the Contractor shall not be liable for forfeiture of its performance security, Penalty or termination for default; if and to the extent that, it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 50.2 For purposes of this Clause, "Force Majeure" means an event beyond the control of the Employer and the Contractor, which makes it impossible or illegal for a party to perform, including but are not limited to:
- a) act of God;
 - b) war, hostilities (whether war be declared or not), invasion, act of foreign enemies, mobilisation, requisition, or embargo;
 - c) rebellion, revolution, insurrection, or military or usurped power, or civil war;
 - d) contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosive, or other hazardous properties of any explosive nuclear assembly or nuclear component of such an assembly;
 - e) riot, commotion or disorder, unless solely restricted to employees of the Contractor or of his Subcontractors currently or formerly engaged on the Works.



- 50.3 If a Force Majeure situation arises, a Party shall promptly notify other Party in writing of such conditions and the cause thereof, within 21 days of such occurrence. If neither party issues any notice regarding the event within 21 days of its occurrence, the said event shall be deemed not to have occurred and the Contract shall continue to have effect as such.

Neither the Employer nor the Contractor shall be considered in default or in contractual breach to the extent that performance of obligations is prevented by a Force Majeure event which arises after the date of Notice to Proceed. Upon the occurrence of such Force Majeure, the affected party shall endeavour to continue to perform its obligations as far as reasonably practicable.

If affected by such Force Majeure, the Contractor shall promptly notify the Engineer of any proposals for overcoming the consequences of the Force Majeure, including any reasonable alternative means for performance, but shall not carry out these proposals without the consent of the Engineer.

The obligations under the Contract shall be resumed as soon as practicable after the event has come to an end or ceased to exist. In case of doubt or dispute, whether a particular occurrence should be considered an "event" as defined under this clause, the decision of the Employer shall be final and binding.

51. Procedure for Resolution of Disputes

- 51.1 The Employer and the Contractor shall make every effort to resolve amicably through negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 51.2 If the Contractor is not satisfied with the decision taken by the Employer, the dispute shall be referred by either party to Arbitration within 30 days of the notification of the Employer's decision.
- 51.3 If neither party refers the dispute to Arbitration within the above 30 days, the Employer's decision will be final and binding.
- 51.4 The Arbitration shall be conducted in accordance with the arbitration procedure stated in the respective Special Conditions of Contract.

52. Limitation of Liability

- 52.1 Except in cases of criminal negligence or wilful misconduct, and in the case of infringement pursuant to GCC Clause 58.1,
- a) The Contractor shall not be liable to the Employer, whether in Contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Contractor to pay Penalty to the Employer; and
- b) The aggregate liability of the Contractor to the Employer, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective works / equipment.

53. Governing Language

- 53.1 The Contract shall be written in English language. Subject to GCC Clause 3, English language version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the Contract, which are exchanged by the parties, shall be written in the same language.



54. The Courts of Jurisdiction

- 54.1 Any suit or application, arising out of any dispute or difference on account of this contract shall be filed in a competent court at Bangalore, Karnataka only and no other court or any other district of the country shall have any jurisdiction in the matter.

55. Notices

- 55.1 Any notice given by one party to the other pursuant to this Contract shall be sent to other party in writing or by facsimile or cable or telex or by hand (duly acknowledged) and confirmed in writing to the other Party's address specified in Special Conditions of Contract.

56. Use of Contract Documents and Information; Inspection and Audit by the Government

- 56.1 The Contractor shall not, without the Employer's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Employer in connection therewith, to any person other than a person employed by the Contractor in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.
- 56.2 The Contractor shall not, without the Employer's prior written consent, make use of any document or information enumerated in GCC Clause 56.1 except for purposes of performing the Contract.
- 56.3 Any document, other than the Contract itself, enumerated in GCC Clause 56.1 shall remain the property of the Employer and shall be returned (in all copies) to the Employer on completion of the Contractor's performance under the Contract if so required by the Employer.
- 56.4 The Contractor shall permit BMRCL to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by BMRCL, if so required by BMRCL.

57. Site Investigation Reports

- 57.1 The Contractor, in preparing the Tender, shall rely on any site investigation reports referred to in the 'Appendix to Form of Tender', supplemented by any information available to the contractor.

58. Indemnity Clause:

- 58.1 The Contractor shall indemnify the Employer against all third-party claims of infringement of Intellectual Property rights of patent, trademark or industrial design rights arising from use of the materials or design or data or any part thereof in India.
- 58.2 The Contractor shall ensure that the attendants provided by him maintain perfect discipline and behaviour and they shall not in any manner cause any interference, annoyance, nuisance to BMRCL or its visitors or any other person. In the event of the complaint by the BMRCL authorised staff, the Contractor shall immediately replace any such attendant.
- 58.3 The Contractor agrees and undertakes that the services provided by the attendants shall be to the entire satisfaction of BMRCL and the Contractor shall ensure staff/ Technician that they are the employees of the Contractor. They shall not have any claims against BMRCL and BMRCL shall not be liable to wages, salary, compensation and any other emoluments or any statutory benefits due to them under any law or regulation. The Contractor shall be responsible for providing such amenities or emoluments to its employees admissible under the law/rules/regulation and service contract, as the case may be.



- 58.4 The Contractor shall at all times comply with the laws applicable to it. The Contractor shall take all reasonable steps during the period of this agreement and shall be solely responsible for third party safety.
- 58.5 The Contractor shall keep BMRCL indemnified of any loss/damages arising out of any fines or other governmental or private actions arising out of this agreement or during the period of the present agreement or extended period. The Contractor shall at all times indemnify the BMRCL and keep it and its staff and officials indemnified, saved, defended and harmless, from and against all suits, actions, proceedings, and all costs, charges, expenses, fines, penalties, prosecutions, losses, damages, liabilities, claims and demands which BMRCL may bear, incur or suffer, and/or claimed from it, due to or by reason or any default, breach, non-compliance, non-observance and/or non-performance or any of the terms, conditions, covenants, stipulations or provisions hereof by the Contractor.

59. Management meetings

- 59.1 The Employer may require the Contractor to attend a management meeting. The business of a Management meeting shall be to review the progress achieved and the plans for remaining work.
- 59.2 The responsibility of the parties for actions to be taken is to be decided by the Employer either at the Management meeting or after the management meeting and stated in writing to be distributed to all internal stakeholder.

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SECTION-VI
SPECIAL CONDITIONS
OF CONTRACT (SCC)



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SECTION VI: SPECIAL CONDITIONS OF CONTRACT**1. General**

The following Special Conditions shall be read in conjunction with the Section V: General Conditions of Contract including Amendments/ Corrigendum thereto. If any provision in these Special Conditions is at variance with that of the aforesaid documents, the later shall be deemed to take precedence there over.

2. Scope of Work

The Preventive Maintenance Contract work under this Contract comprises of works as specified in the Technical Specifications and Scope of Work.

The Preventive Maintenance Contract (PMC) shall cover Scheduled Preventive Maintenance, Manpower support for corrective maintenance on a 24 hours x 7 days basis during the Contract period in mainline and depot.

Contractor shall carry out Preventive maintenance activities of signalling assets i.e., Point machines (IRS & S700K Type), Axle-counters and its modules, Signals (Color light, Shunt signals & Route Indicators), AP poles with WRU box for DCS and VTS boxes, Cabinets in SER/TER, OCC, BCC, Train borne equipment, and Modular UPS System with VRLA batteries installed in depot and mainline of BMRCL Reach-5. Contractor shall also support the BMRCL staff with manpower for corrective maintenance of the systems under the scope of the contract.

By agreement the Contractor shall be authorized to undertake this PMC work and will be held fully responsible for the execution and performance for the entire Contract period.

During the tenure of the PMC, the contractor shall be responsible for all Electro-Mechanical works related to the scope of work carried out by contractor. The contractor shall always maintain all Safety equipments in proper working condition at any point of time. The Employer shall be provided necessary support to carry out checks as and when required.

2.1 The Maintenance work:

Scheduled Preventive Maintenance work of signalling systems shall be carried out usually in non-revenue hours between 12.00 am to 4.00 am in mainline and 12.00 pm to 3.00 pm in depots. Maintenance block will be provided generally 3-4 days in a week as per the availability. These timings are as per the present-day practice and may change at later stage. However, maintenance of assets which does not affect the train operation can be done in other timings with prior approval of BMRCL representative. However, BMRCL reserve the right for such decision due to operational constraints. It must be ensured that in no case maintenance activities should affect Train Operations. The contractor shall submit annual preventive maintenance plan before commencement of actual works and monthly plan (minimum two weeks in advance), for the scheduled activities proposed to be carried out during the month to BMRCL and obtain concurrence well in advance. In addition, contractor shall also deploy manpower for corrective maintenance support during the day/night mainlines and depot in consultation with BMRCL.

2.2 Deployment of staff:

The contractor shall engage and deploy well trained and competent technical personnel to ensure regular preventive maintenance as well as the corrective/ breakdown maintenance as per the requirement of the contract to ensure trouble free service throughout the Contract Period.

The maintenance team of the Contractor shall inform the Employer's representative and shall start the work only after obtaining permission from the concerned BMRCL staff/authorized representative.



2.3 Man Power requirement: (GCC Clause 9.2)

The Contractor shall set up office at convenient location in BMRCL premises. The required manpower for the scheduled activities and support for breakdown maintenance has to be assessed by the vendor.

However, Requirement of Minimum Man power to be engaged for carrying out maintenance and support for breakdown works is detailed here under:

Sl. No	Designation	Qty
1	Manager	1
2	Technician (Electronic Mechanic/Electrician/Fitter)	19

- The above listed manpower is minimum requirement .
- The Contractor may make his own assessment based on work load and deploy accordingly in shifts/General for 24 x 7 working.
- All the staff cited above shall be provided with uniforms and PPEs by the contractor.
- All the staff cited above shall be provided with Smart phones with data pack and shall keep the phone active for attending to any call, the cost of which shall be borne by the contractor.

Eligibility Criteria and roles and responsibilities for Manager and Technicians:

Sl. No.	Name of the Post	Qualification	Responsibility
1	Manager	Candidate must be a Graduate engineer (Electrical/Electronics/Mechanical/Instrumentation) with 03 years of experience/ Diploma Engineer(Electrical/Electronics/Mechanical/Instrumentation) with minimum 5 years of experience in signalling system. The candidate should have adequate technical knowledge on Point machines, track circuits, signals and UPS system.	1. Shall directly report and Co-ordinate with BMRCL representative 2. Scheduling of maintenance 3. Preparation of shift roster 4. Inspection and Monitoring of maintenance activity 5. Tools and consumables tracking. 6. Arrange required training as per clause 20.0 of Technical Specifications 7. Conducting monthly review meetings 8. Preparation of self-assessed KPI & Processing of bills 9. Verification of Record books and submission of maintenance activities carried out on daily basis.
2	Technician (Electronic Mechanic/Electrician/Fitter)	Technicians must possess Two years ITI Electrical trade from a Govt. Recognized institute. 25% of technicians shall have minimum one Year Experience in the field of signalling system. Remaining technicians shall possess one year experience in any electrical/ electronic /mechanical industry.	1) Shall report to Manager 2) Undertaking maintenance activity as per schedule 3) Carrying out all activities instructed 4) Ensuring safety of equipments and self.



The Contractor shall submit **Curriculum Vitae** of the personnel proposed to be deployed to BMRCL. Each CV shall have the current photographs of the person and shall be signed by the person. On top of every CV, the proposed category is also to be indicated. Each CV shall contain the following information but not limited to: -

- i. Name in full
- ii. Father's name
- iii. Date of Birth
- iv. Post for which CV is presented
- v. Present Address
- vi. Permanent Address
- vii. Educational Qualification
- viii. Experience in relevant field of activity
- ix. Whether any antecedents of Police cases (Police verification certificate to be enclosed).

2.4 Safety of workmen:

BMRCL shall in no way be responsible for any damage or injury to contractor's man power or their property during the period of maintenance/service as per this contract and observe all safety precautions. BMRCL shall not reimburse any payment towards medical expenses for contractor staff, in case of accident/incident takes place in BMRCL premises. All the members of the maintenance teams shall be trained for safety rules during work by certified / competent institutions regularly and before induction into the teams. The Engineers and supervisors of the successful bidder will be trained by BMRCL and issued Competency Certificates for obtaining Permit to Works.

2.5 Identity:

Contractor's maintenance staff shall wear uniform with Personal Protective Equipment and shall display identity card with photograph issued by the Contractor while entering the BMRCL premises. BMRCL shall in no way be responsible for any incident/accident to the Contractor's staff.

2.6 Maintenance of log book and submission of Reports:

The Contractor shall submit half yearly & yearly schedule for the forthcoming maintenance well in advance to the Employer and maintain a log book, Station/ Depot wise in chronological order. Every fault noticed/reported by the Employer shall be entered in the log book together with the action taken.

2.7 Transportation:

The Employer will not have any responsibility or liability for transportation of contractor's men and materials. The contractor shall make his own arrangements for the transportation of men and materials for the work location.

2.8 Safety Audit:

The Contractor shall conduct internal safety audit on both the Safety Management system and the internal site conditions to ensure safe working of system during the Contract period.

2.9 Spares:

BMRCL shall supply for the spares required for the replacement due to periodic wear out and or during corrective maintenance activities.

2.10 Testing Equipment:



Special Tools & Testing equipments shall be supplied by BMRCL. The Contractor shall utilize and return it in serviceable condition. During the work if the equipment is damaged by the contractor the same shall be repaired and made serviceable by the contractor.

2.11 Consumables:

The Contractor shall maintain consumables being used and at no point of time maintenance work shall not be stalled for want of consumables. The Contractor shall procure and maintain following consumable throughout the period of contract for carrying out Scheduled preventive maintenance.

1. Water sealant (General Purpose)
2. Bannian cloth waste
3. Lugs of suitable sizes
4. Grease NLGI3 Castrol or equivalent
5. Chair plate grease Lubcon Terrasol 100 or equivalent
6. Motor Oil – 15W 40
7. WD40 spray or equivalent
8. Optic fiber cable cleaning spray
9. Touch up paint of suitable colour for enclosure
10. Antistatic soft brush
11. Cleaning Brush
12. Hand gloves
13. Personal Protective Equipments
14. And in any other materials for maintenance works in scope

2.12 Maintainability:

The Contractor shall maintain the signalling gears in such a way that following parameters are achieved to ensure trouble free service throughout the Contract period. The Contractor shall maintain following key performance indicators which will be linked up with payment.

Key performance Indicators will be assessed based on the table given below:

KPI	Description	Marks
A	Scheduled Maintenance Completion	70
B	Maintaining of minimum manpower	15
C	Maintaining of necessary consumables	10
D	Record keeping, Uniform, Safety Equipment (PPE) & Personnel Behaviours	05

Based on the details given below Contractor shall submit the self-evaluated KPI with supporting documents. Employer shall verify the correctness and certify the same.

KPI	Conditions	Marks
A. Scheduled Maintenance	>90% Scheduled maintenance activities are carried out as per planned target	70
	>80% up to 90% Scheduled maintenance activities are carried out as per planned target	60
	>70% up to 80% Scheduled maintenance activities are carried out as per planned target	50
	>60% up to 70% Scheduled maintenance activities are carried out as per planned target	40
	< 60% Scheduled maintenance activities are carried out as per planned target	0



B. Maintaining of minimum manpower	Man power >90% up to 100%	15
	Man power >80% up to 90%	10
	Man power >70% up to 80 %	5
	Man power < 70%	0
B. Maintaining of necessary consumables	Consumables >80% up to 100%	10
	Consumables >60% up to 80%	5
	Consumables < 60%	0
D. Record keeping, Uniform, PPE for Safety & Personnel Behaviours	Good Record keeping, Good Personnel Behaviours, staff wearing Uniform & PPE for Safety	5
	Any deviation from above	0

Note: If the Scheduled maintenance not carried out in more than three stations/depot in a given quarter is considered as poor performance of the contract.

2.13 Contract price and Terms of Payment:

The Price quoted by the Tenderer shall be fixed for the duration of the Contract and shall not be subject to adjustment on any account.

The payment shall be made on a **Quarterly Basis** after submitting the Joint inspection report, self-evaluated KPI and valid Invoice by the Contractor which will be reviewed by BMRCL along with other submittals as required under the contract conditions. Following documents shall be submitted for arranging payment:

1. Maintenance schedule completion details
2. Self-evaluated KPI form
3. Attendance Sheet as a proof of minimum manpower
4. Penalty details
5. Certificate from the official of BMRCL regarding satisfactory performance during the period of the bill.

Measurements for payments shall be made for the Scheduled maintenance carried out on station basis and overall performance grading made on station basis. The payment as per the bill raised by the contractor will depend upon the overall score obtained by the contractor. Details of payment evaluation are as under:

Sl. No	Total Marks for KPI (A+B+C+D)	% of payment
1	>90 up to 100	100%
2	>80 up to 90	90%
3	>70 up to 80	80%
4	> 60 up to 70	70%
5	>50 up to 60	60%
6	>40 up to 50	50%
7	<40	20%



2.14 Penalty (GCC sub-clause 45.2):

During the Contract period, if any signalling system under the scope of contract remains out of service for the period stated herein due to non-availability of consumables or due to lack of attention, then BMRCL shall impose a penalty as under: Employer has rights to waive off the penalty based on genuine reasons not attributable to contractor. In such case contractor shall write letter with details reason explaining inability of contractor for completion of work within target time. The details of possible events, their target time, penalties are listed in table below.

Activity	Time	Penalty (in INR)
Non availability of manpower and consumables causing maintenance delay	>3 upto 5 cases in a quarter	5,000.00 per case
	>5 upto 7 cases in a quarter	10,000.00 per case
	>7 cases in a quarter	25,000.00 per case
Non-compliance to maintenance schedule	>3 upto 5 cases in a quarter	5,000.00 per case
	>5 upto 7 cases in a quarter	10,000.00 per case
	>7 cases in a quarter	25,000.00 per case
Non completion of work in power block time and affecting train operation	Per case	1,00,000.00 per case
Non deployment of manager	Per Month	50,000 per case
Non deployment of Technician	Per Month	30,000.00 per case

The penalty shall be levied and deducted from the due payments of the contractor irrespective of their KPI score and percentage of payment. The decision of BMRCL regarding levy of penalty shall be final and binding. However maximum amount of penalty liveable shall be 10% of the total contract value in accordance with Clause No 45 of General Conditions of contract and appendix to form of tender.

2.15 Storage:

BMRCL will provide the storage space for Stores at convenient/available location. The allocation of storage space will be purely based on the availability and BMRCL reserves the right on the above subject. The above provision is tentative and based on the availability. Contractor shall have own system of safe custody and maintenance of their consumables in the above storage space and BMRCL will in no way be responsible for the safety and security of their assets. The setting up of infrastructure in the above storage space shall be the sole responsibility of the Contractor. BMRCL reserves the right to inspect the above location at short notice. The allotted space shall ONLY to be utilized for works connected with above Contract only.

2.16 Contractor's Liability:

The Contractor shall pay salary & allowances to their staff as per extant Labour Laws.

3. Subcontracting (GCC Clause 7)

Subcontracting is not allowed.

4. Compliance with Labour regulations (GCC Clause 9.7)

During continuance of the Contract, the Contractor and his subcontractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the



provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications / bye laws / Acts / Rules / regulations including amendments, if any, on the part of the Contractor, Employer shall have the right to deduct any money due to the Contractor including his amount of Security Deposit. The Employer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

The Employees of the Contractor and the Subcontractor in no case shall be treated as the employees of the Employer at any point of time.

5. Safety and Security Measures (GCC Clause 15)

Fire Precautions

- 5.1 The Contractor, his agents, representative, workmen etc., shall strictly observe the orders pertaining to fire precautions prevailing within the restricted area.
- 5.2 Motor transport vehicles, if any allowed by the Engineer to enter the restricted area, must be fitted with serviceable fire extinguishers.

6. Access to the Site (GCC Clause 16)

Security and Passes

- 6.1 Contractor's attention is invited to condition that, he shall employ only Indian Nationals after verifying their antecedent and loyalty. The Contractor shall, maintain list of his agents, employees and work people concerned and shall satisfy the Engineer as to the bonafide of such people, and submit to the Engineer / Employer on demand.
- 6.2 The Employer shall at his discretion have the right to issue passes as per rules and regulations of the installation, area in force to control the admission of the Contractor, his agent's employees and work people to the site of the work or any part thereof. Passes should be returned at any time on demand by the Engineer or the authorities concerned and, in any case on completion of PMC work.
- 6.3 The Contractor and his agents, employees and workers shall observe all the Rules promulgated by the authority controlling the PMC area in which the work is to be carried out. e.g. Prohibition of smoking and lighting, fire precautions, search of persons on entry and exit, keeping to specific route, observing specified timing, etc., nothing extra shall be admissible for any man hours, etc., on this account.

6.4 Conditions of working

Work under this Contract lies in restricted area.

6.5 Visit to site within the restricted area

Permission to enter the restricted areas at the time of submission of Tenders can be obtained through the Employer or his authorized Representative. Tenderers are advised to send prior intimation of their agents, representatives etc., if any, dates and time of their proposed visit so that necessary arrangements may be made by Employer to secure admission. Whether a Tenderer visits the site or not he shall be deemed to have full knowledge of the restriction of entering into/exit from and working within the restricted area.

6.6 Entry/Exit

The Contractor his agents/representatives, workmen etc., and his materials, carts, trucks or other means of transport etc., will be allowed to enter through and leave from only such gate or gates and such times as the employer or authorities in charge of the restricted areas may at



their sole discretion permit to be used. The Contractor's authorized representatives are required to be present at the place of entry and exit for the purpose of identifying his carts, trucks etc., to the personnel in charge of the security of restricted areas.

6.7 Not used

6.8 Identity of Workmen

6.8.1 Every workman shall be in possession of an identity card. The Identity Card will be issued after thorough investigation of the antecedents of the labourers by the Contractors and attested by Officer-in-Charge of the unit concerned in accordance with the Standing Rules and regulations of the units.

6.8.2 Contractor shall be responsible for the conduct and action of his workmen, agents or representatives.

6.9 Working Hours

The Contractor shall deploy well trained personnel 365 days x 24 Hours on a roster for fulfilment of maintenance schedules as mentioned in the Technical Specifications and Scope of Work.

6.10 Co-operation with other Agencies

The Contractor shall permit free access and generally afford reasonable facilities to other agencies or departmental workmen engaged by the BMRCL to carry out their part the work, if any, under separate arrangements.

6.11 Electric Supply

For Routine Works for execution of Scheduled Maintenance and attending Breakdowns, Electricity shall be free of cost and can be tapped from the nearest available Power Supply Sockets duly following all safety precautions. Electricity Consumption for the office cum stores to be set up at designated location in depots shall also be Free of Cost. However, the Electrical Equipment provided for such space with the scheme shall be approved by BMRCL. No other works other than the works connected to the above contract works should be carried out in the above BMRCL Space.

6.12 Emergency Works

If, by reason of an emergency arising in connection with and during the execution of the Contract, any protective or remedial work is necessary as a matter of urgency to prevent damage to the Facilities, the Contractor shall immediately carry out such work, under intimation to the Engineer.

6.13 Search

Thorough search of all persons and transport shall be carried out at each gate and for as many times as the gate is used for entry or exit and may also be carried out at any time or any number of times at the work site within the Restricted area.

7. Inspection and Tests (GCC Clause 39)

7.1 Inspection and tests at final acceptance are as follows:

Inspection and tests at final acceptance are as follows:

7.1.1 The inspection of the materials / Works shall be carried out to check whether the materials / Works are in conformity with the Technical Specifications attached to the Contract and shall be in line with the inspection/test procedures laid down in the Technical Specifications and the General Conditions of Contract. Following broad test procedure will generally be followed for inspection and testing of works.



7.1.2 The acceptance test will be conducted by the Contractor in presence of the Employer/their representative or any other person nominated by the Employer, at its option. The acceptance will involve trouble-free operation. There shall not be any additional charges for carrying out acceptance tests. No malfunction, partial or complete failure of the Works should occur.

7.1.3 In the event of the materials / Works failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which the Employer reserves the rights to get the Works replaced / redone by the Contractor at no extra cost to the Employer.

7.2 Materials and Samples

7.2.1 The Contractor shall produce samples of consumable/materials etc., that he proposes to use in the Works and get it approved in writing by the Engineer Authority before incorporating in the work. The materials, articles etc., as approved shall be labelled as such and shall be signed by the Engineer Authority and Contractor's representative. The samples shall be kept in the custody of the Engineer-in-Charge till payment of final bill.

7.2.2 Materials provided by the Contractor for incorporation in the work shall unless otherwise specified in the particular specifications, comply with the requirement of the latest relevant Indian Standard (IS) in the website of BIS i.e. www.bis.org.in. and as specified in Karnataka Pollution Control Board (KPCB).

8. Variations (GCC Clause 41)

8.1 The Total variation shall be limited to $\pm 25\%$ of the Total Original Value of the Contract.

9. Taxes and Duties (GCC Clause 28)

9.1 The Contractor shall maintain complete records in respect of payments made by them towards IGST/GST payable to various authorities (except Income Tax or Corporate Tax). The detailed records shall however remain open for inspection by the Employer/ Engineer at any time and copies of the records shall be furnished as required by the Employer.

9.2 The Contractor shall be solely responsible for discharging all the statutory payments to the authorities concerned including custom duty, IGST and GST.

10. Termination (GCC Clause 47)

10.1 The Fundamental breach of the Contract shall also include that "the Contractor has contravened GCC Clauses 7 (Subcontracting) and 9 (Personnel).

10.2 In the event the Employer terminates the Contract in whole or in part, pursuant to GCC Clause 47, the Employer;

- (i) shall forfeit the performance Security, and
- (ii) may carry out the Works, upon such terms and in such manner as it deems appropriate, Works similar to those incomplete, and the Contractor shall be liable to the Employer for any excess costs for such similar Works. However, the Contractor shall continue the performance of the Contract to the extent not terminated.

11. Procedure for Resolution of Disputes (GCC Clause 51)

The procedure for arbitration shall be as follows:

11.1 In case of dispute or difference arising between the Employer and the Contractor relating to any matter arising out of or connected with this agreement it shall be settled in accordance with the Arbitration and Conciliation Act, 1996 and its latest amendments. The disputes or differences shall be referred to a Sole Arbitrator. The Sole Arbitrator shall be appointed by agreement between the parties; failing such agreement, a request may be made by BMRCL to the High Court of Karnataka to take necessary measure for appointment of the Sole Arbitrator.



- 11.2 Arbitration proceedings shall be held at Bangalore, Karnataka, India. The language of the arbitration proceedings and that of all documents and communications between the parties shall be English.
- 11.3 The cost and expenses of arbitration proceedings will be paid as determined by the Arbitrator. However the expenses incurred by each party in connection with the preparation, presentation, etc., shall be borne by each party itself.
- 11.4 Performance under the Contract shall continue during the arbitration proceedings and payments due the Contractor by the Employer shall not be withheld, unless they are the subject matter of the arbitration proceedings.

12. Notices (GCC Clause 55)

For the purpose of all notices, the following shall be the address of the Employer and Contractor. **Employer:**

The ED (O&M)

Bangalore Metro Rail Corporation Ltd (O&M Wing)

Admin Building, Baiyappanahalli Depot,

Near NGEF Signal, Old Madras Road,

Bangalore – 560038, Karnataka, India

Contractor:

.....

(To be filled in after the award of Contract / as specified in the Contract Agreement).

13. Use of Contract Documents and Information (GCC Clause 56)

The Contractor shall not communicate any classified information regarding PMC work to others without prior approval of Engineer. The Contractor shall also not make copies of the design/drawings and other documents furnished to him in respect of works and he shall return all documents after completion of works or on earlier determination of Contract. The Contractor shall along with final bill, attach a receipt from the Engineer in respect of his having returned the classified documents as per condition of General Conditions of Contract.

14. Proprietary Materials (New Clause)

- 14.1 The Contractor shall obtain proprietary materials from manufacturers authorized stockiest where such authorized stockiest have been appointed. The Contractor shall produce original receipt voucher of the same.
- 14.2 The Contractor shall ensure that proprietary materials are brought to site in original sealed containers/packing, breaking manufacturer's markings.

15. Protection of Environment:

The Contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation. During continuance of the Contract, the Contractor and his Subcontractors shall abide at all times by all existing enactments on environmental protection and rules made there under, regulations, notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority.



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SECTION-VII TECHNICAL SPECIFICATIONS & SCOPE OF WORK



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SECTION VII: TECHNICAL SPECIFICATIONS & SCOPE OF WORK**Table of Contents**

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SECTION VII: TECHNICAL SPECIFICATIONS & SCOPE OF WORK**1.0 Preamble:**

1.1 This tender is for providing ANNUAL PREVENTIVE MAINTENANCE CONTRACT FOR SIGNALLING SYSTEMS INSTALLED IN REACH-5 STATIONS, HEBBAGODI DEPOT AND OCC & BCC. Reach-5 designated as Yellow line is from Rashtreeya Vidyalaya Road to Bommasandra with Depot at Hebbagodi is under the scope of the contract.

2.0 **Scope of Work:** Contractor shall carry out Preventive maintenance activities of signalling assets i.e., Point machines (IRS & S700K Type), Axle-counters and its modules, Signals (Color light, Shunt signals & Route Indicators), AP poles with WRU box for DCS and VTS boxes, Cabinets in SER/TER, OCC, BCC, Train borne equipment, and Modular UPS System with VRLA batteries installed in depot and mainline of BMRCL Reach-5. Contractor shall also Support the BMRCL staff with manpower for corrective maintenance of the systems under the scope of the contract.

3.0 Population of Signalling assets:

3.1 Total Population of Signalling assets of Reach-5 covered under present Annual maintenance contract are as under:

SL. No	Equipment	Quantity
1	Point Machine S700 K	28
2	Point Machine IRS Depot	44
3	CHK	24
4	Axle counter	213
5	Main Signal, Shunt Signal, and Route Indicator	129
6	Balise	688
7	PDC	19
8	UPS	19
9	Trainborne Equipment	15
10	Airlink Trackside equipment	126
11	VTS	124
12	LVS	1
13	Marker Board	100
14	Indoor SER maintenance / cleaning cubicles - Interlocking stations/depot	3
15	Indoor SER maintenance / cleaning cubicles - Object controller stations	3
16	Indoor SER maintenance / cleaning cubicles -secondary stations	11
17	Indoor maintenance / cleaning cubicles OCC/BCC	2

**4.0 Schedule of Maintenance: -****4.1 Scheduled Maintenance of installations: -**

Scheduled maintenance of signalling assets shall be carried out as per check list detailed in this section. Scheduled maintenance shall be carried out on Fortnightly/Monthly/Quarterly/Half-yearly/ yearly basis to ensure healthiness of the system. Details of checks and activities to be carried out are clearly detailed in SECTION VIII check list. The main purpose of carrying out scheduled maintenance is to maintain all the signalling gears and associated accessories in best operating conditions and overall functioning & reliability of the systems are not affected.

SL. No	Equipment	Quantity	Periodicity
1	Point Machine S700 K	28	Monthly Half yearly
2	Point Machine IRS Depot	44	Biweekly Monthly Quarterly
3	CHK	24	Yearly
4	Axle counter	213	Yearly Two yearly
5	Main Signal, Shunt Signal, and Route Indicator	129	Six monthly
6	Balise	688	Yearly
7	PDC	19	Six monthly Yearly
8	UPS	19	Quarterly
9	Trainborne Equipment	15	weekly Quarterly Six monthly
10	Airlink Trackside equipment	126	Six monthly Yearly
11	VTS	124	Quarterly Half yearly
12	LVS	1	Quarterly Half yearly
13	Marker Board	100	Yearly
14	Indoor SER maintenance / cleaning cubicles - Interlocking stations/depot	3	Half yearly Yearly
15	Indoor SER maintenance / cleaning cubicles - Object controller stations	3	Half yearly Yearly
16	Indoor SER maintenance / cleaning cubicles -secondary stations	11	Half yearly Yearly
17	Indoor maintenance / cleaning cubicles OCC/BCC	2	Half yearly Yearly

4.2 Corrective Maintenance Support:

As per the requirement BMRCL for attending the corrective/breakdown maintenance, the contractor shall arrange a team as deemed, out of the engaged manpower for this contract at no extra cost to BMRCL. They shall report to BMRCL supervisor and work as per his/her instructions while attending the failure of system under the scope.

5.0 Maintenance Requirements

5.1 The contractor shall provide the minimum man power requirements and consumables for effectively carrying out Scheduled Maintenance Works.

a. Man-power Requirement (SCC Clause 2.3)

Contractor shall arrange for skilled manpower as detailed in SCC Clause 2.3. The details of experience and CVs shall be furnished in line with SCC Clause 2.3.

b. Consumables (SCC Clause 2.11)

The Contractor shall maintain adequate quantity of consumables listed in SCC Clause 2.11 for carrying out maintenance works.

5.2 Maintenance during Contract Period

In addition to his obligations under the conditions of contract, the contractor shall provide maintenance services throughout the **Preventive Maintenance Contract Period (PMC)**. Maintenance work shall include work described in approved maintenance schedule, attendance to all service calls, and the followings:

- During the PMC the Contractor shall depute sufficient trained, Experienced and competent personnel on Site on 24 hours x 7 days basis, for Preventive maintenance and Breakdown support. Such persons shall have their generic competence established and must demonstrate their specific competence and knowledge in the particular



systems, environment and procedures. Minimum qualification and experience requirement of contractor's staff are detailed in Clause No. 2.3 of Special Conditions of Contract.

- b. The Contractor shall maintain adequate quantity of consumables in his custody at site in to minimize the time required to do maintenance. The list of these consumables should be submitted for Approval at the same time as the submission of the Preventive Maintenance Schedule.
- c. The Contractor shall depute personnel to support breakdown activities at any time, when being called on by the BMRCL.
- d. The Contractor shall provide Quarterly reports on the progress of maintenance in an agreed format.
- e. Records of each routine visit with details of the work done or action taken shall be entered on a log book and retained in the location as decided by the Employer's Representative.
- f. The Contractor shall ensure that adequate communication facilities are provided to his staff during the PMC.

5.3 Maintenance Strategy

The Contractor shall make monthly planning for completing the maintenance schedules as per the power block schedules. Contractor shall prepare monthly roster for the staff deployed and submit for Employer's Representative for review.

6.0 DOCUMENTATION OF MAINTENANCE RECORDS:

Suitable Mechanism shall be developed by the successful contractors for monitoring of day-to-day activities by BMRCL officials for various activities carried out by the Contractor. These details shall be accessed by authorized BMRCL officials at various levels, as per agreed procedures. The contractor shall submit but not limited to the following for employer's approval:

- a. Total number of manpower available and modalities of their deployment (Roster)
- b. Annual maintenance plan covering all the signalling assets
- c. List of Tools & tackles, consumables and PPE owned by contractor.
- d. Formatting of records for the check lists.

Further the successful contractor shall maintain history of records equipment/location wise for the maintenance carried out and shall be accessed by authorized BMRCL officials in various levels, as per agreed procedures.

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SECTION-VIII
SYSTEM DESCRIPTION,
CHECKLISTS, LIST OF
ASSETS



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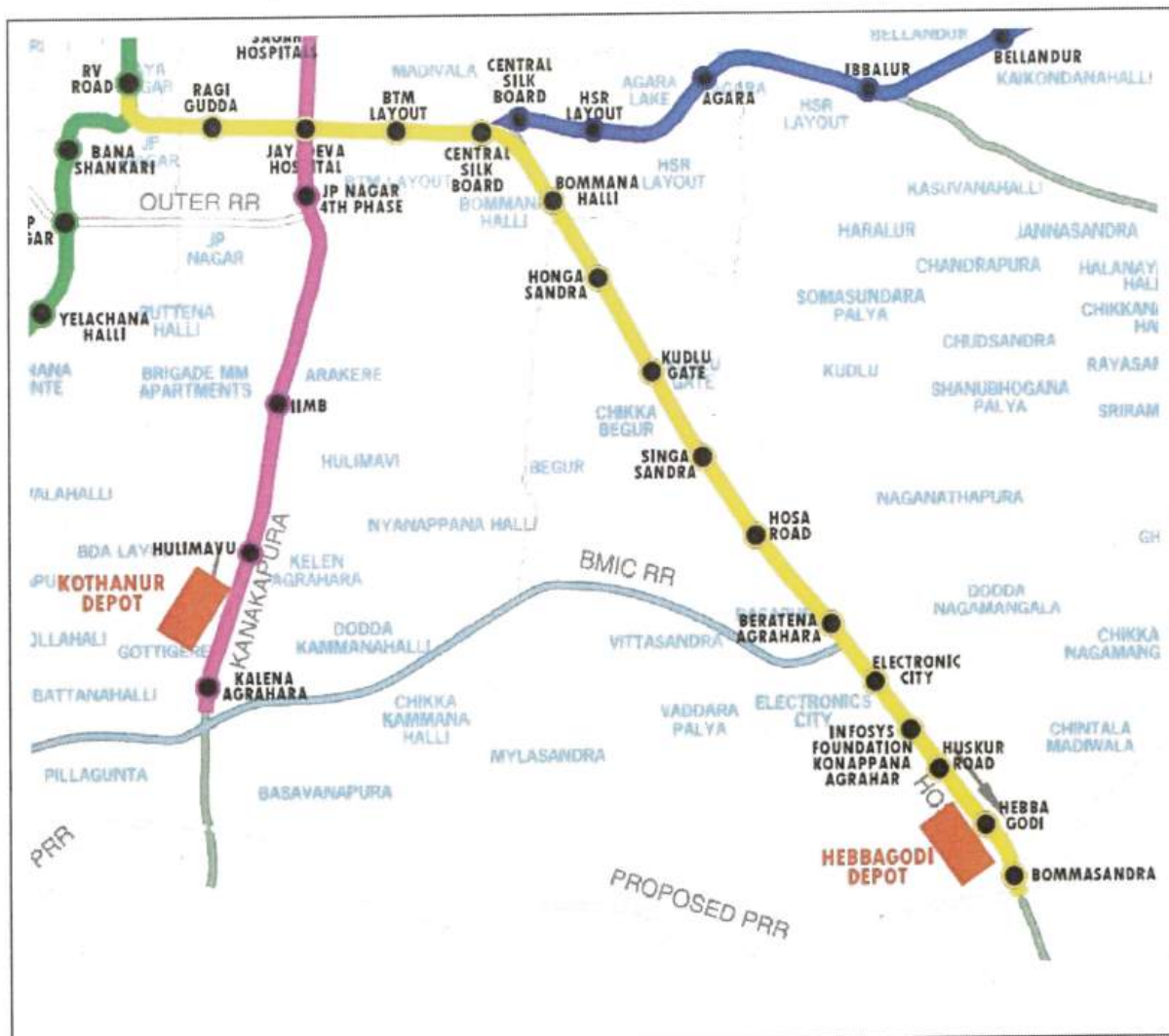


SECTION VIII: SYSTEM DESCRIPTION, CHECKLISTS, LIST OF ASSETS**Table of Contents**

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1. Reach-5 Map



2. System description

2.1 Westrace Mk II

- Trainguard Westrace 2 is the product name of computer-based Interlocking (CBI) by M/s Siemes.
- Trainguard Westrace 2 is redundant and hot standby.
- It monitors all trackside equipments and controls them (ex: Signal, point, Axel counters)
- Field specific data and control logic is stored in EEPROM
- It has interface with TGMT (Automatic train control), Rail9000 (Automatic train supervision), DCS (Data communication system)
- Receives and processes request from ATS/VDU and controls field equipments

2.2 TGMT (Train guard mass Transit)

Trainguard MT is a communication-based train control system (CBTC) of M/s Siemens



2.2.1 Wayside TGMT

Wayside TGMT receives all trackside information from CBI (Ex: Track vacancy, point, signal) and processes this information and gives it to onboard TGMT through the Wayside Access point.

2.2.2 Onboard TGMT

Onboard TGMT receives wayside data from Wayside Access point through the onboard radio antennas and calculate target speed, target distance. It works on moving block principle

2.3 ATS (Automatic train supervision)

ATS system by M/s Siemens, product name is Rail9000, controls and monitor the operation of the railway delivering punctual and reliable train service to the passengers.

2.4 DCS (Data communication system)

DCS provides secure and highly available data transmission between the subsystems ATS, CBI and TGMT.

2.5 Point Machines

2.5.1 Switchguard S700K Type point machines

The Switchguard S700K point machine is used to operate as non-trailable point with external blade locking components.

It has the following functions:

- throwing of point blades
- retention of point blades in their end (home) positions
- (electrical) detection of blade end position
- a throwing movement already initiated can be reversed
- if the current fails, the point machine can be operated using a crank handle

2.5.2 IRS Point machine

The Point Machine meets the requirements of Indian Railways Specifications (IRS S24) for operating 60kg turnout. These Point Machines are capable of handling 450 kg load with the throw of 220 mm, works on 380V AC. These machines are used only in depot.

2.5 Axel counter system (ACM 250)

The Clearguard ACM 250 modules perform the following process steps:

- Evaluation of the signal pulses trans-mitted by the wheel detection Components.
- Comparison of the number of axles entering a track vacancy detection section with the number of axles leaving it
- Monitoring the track vacancy detection sections and transmission of clear or occupied indications to the interlocking (CBI)
- Optional transmission of sensor and/or block information via ACM-ACM Ethernet communication

2.6 Emergency Stop Plunger (ESP)



Emergency stop plunger: Located on a wall or pillar at the station platform. Press the plunger to stop an approaching train from entering the station. If the train is at the platform, it will be prevented from moving off.

2.7 Stop Protection Key (SPK)

SPK is intended to protect maintenance staff (protection from signalling perspective) when maintenance staff accessing trackside. When SPK is activated, CBI is responsible to put affected signals into RED.

3. List of Assets

SL. No	Equipment	Quantity
1	Point Machine S700 K	28
2	Point Machine IRS Depot	44
3	CHK	24
4	Axle counter	213
5	Main Signal, Shunt Signal, and Route Indicator	129
6	Balise	688
7	PDC	19
8	UPS	19
9	Trainborne Equipment	15
10	Airlink Trackside equipment	126
11	VTs	124
12	LVS	1
13	Marker Board	100
14	Indoor SER maintenance / cleaning cubicles - Interlocking stations/depot	3
15	Indoor SER maintenance / cleaning cubicles - Object controller stations	3
16	Indoor SER maintenance / cleaning cubicles -secondary stations	11
17	Indoor maintenance / cleaning cubicles OCC/BCC	2



4. Checklists of Various Equipment

4.1 IRS Point Machine – Fortnightly

	Details of Maintenance Activity	
	Maintenance of IRS Point Machine	
CHECKS	Security	
	Condition / Deterioration	
	Any obstruction for Point Operation	
	Condition of rods of proper working of TC	
	Gauge Test 2 MM / 5 MM	
	Maintenance of Claw Locks	
CHECKS	Turnout itself in good condition	
	Blades and Stock-Rails in good condition	
	Absence of any abnormal appearance	
	Absence of ballast & debris obstructing the movement of Claw Locks	
	Absence of ballast & debris able to obstruct the movement of rods	
	Contact between blades and Stock-Rails (Less than 1.5 mm gap)	



4.2 IRS Point Machine – Monthly

	Detail of Maintenance Activity	
	Maintenance of IRS point machine	
Cleaning and greasing of Drive bar	Cleaning of surplus Old grease inside point machine	
	Cleaning and greasing of Drive bar	
	Cleaning and greasing of Detector bar	
	Cleaning and greasing of Locking bar	
Inspection / Checks	Power Operation	
	Tightning of electrical termination	
	Detection 2 MM / 5 MM	
	Measurement of Opening of Switch Blade (LHS) at 237 mm from toe of switch 160 +3/-0 mm	
	Measurement of Opening of Switch Blade (RHS) at 237 mm from toe of switch 160 +3/-0 mm	
Inspection / Checks	Maintenance of Claw Locks	
	Condition and tightening of all fastening	
	Presence and condition of all split pins	
Inspection / Check	Maintenance of Drives and Back-Drives	
	Condition and tightening of all bolts	
	Condition of all rods	
	Presence and tightening of all bolts securing adjusting forks	
	Presence and condition of all split pins	



4.3 IRS Point machine Quarterly

Details of Maintenance Activity	
Maintenance of IRS (Quarterly)	
Cleaning and Lubrication	
Oiling of the Reduction Gears	
Greasing of Gear Rim	
Inspection / Checks	
Incoming Power Cable	
External adequate Lubrication	
Electrical Connections	
Hand Operation	
Detection Contacts & Rollers-Visual check	
Maintenance of Claw Locks	
Checking wearing of Claw-Locks	
Cleaning and Lubrication	
Cleaning of surplus of old grease and dust	
Greasing of Locking Parts corridors	
Greasing of Sliding surfaces of Locking Clips	
Greasing of grease nipples (With a M10 Greaser & Grease Gun)	
Measurement of peak current	
Measurement of working Voltage/Current	
Measurement of obstruction Voltage/Current	



4.4 S700K Point machine monthly

Location:	Equipment ID	
	Month	
	Date	
Schedule: Monthly		
1. Visual Inspection		
2. Oiling of chair Plates up to 12 chair plate		
3. Oiling and Greasing of Fish tail and rods.		
4. Opening of switch rail with respect to stock rail at centre of claw lock. Range=160 +3/-0 mm		
5. Housing & Packing condition		
6. Go and No-Go Test (2mm & 5mm Gauge) in both side		
Normal operating voltage		
Normal operating Current		
Obstruction Current		

4.5 S700K Point machine Half Yearly

Location:	Equipment ID	
	Month	
	Date	
Schedule: Half Yearly		
A. Checking of point machine interior:		
a) Check the following on the point machine:		
1. Is the interior of the point machine clean and dry?		
2. Are the ventilation and drainage holes unblocked?		
3. Are the throw bar and detector slide free of rust and lubricated?		
4. Are the control notches of the detector slides in a Centre position over the pointer in both end positions?		
b) Check the following on the housing cover:		
1. Does the housing cover fit without play?		
2. Is the rubber seal on the housing cover present and undamaged?		
3. Are the cover locks and lock cover in proper condition?		



B. Checking of components	
1. Perform a visual inspection.	
2. Examine the components of the point machine to see if they are damaged.	
3. Examine the components of the external claw lock to see if they are damaged.	
C. Checking of cable harness	
1. Check whether the cable harness is held firmly in the cable clamp provided and does not touch any moving parts	
2. If the insulation of the cables is damaged:	
a) Check whether any of the copper conductors have been damaged.	
b) If only the insulation is damaged, wrap the relevant copper conductor with suitable insulating tape.	
3. If a copper conductor is damaged, the cable harness must be exchanged by qualified staff.	
4. Check whether the limit switches are damaged, i.e. show signs of mechanical or electrical wear and/or ingressed moisture. If so, replace the contact assembly.	
5. Check whether the protective covers of the limit switches are present and undamaged.	
6. Check whether the protective cover of the voltage cut-off switch is present and undamaged	
D. Checking of point machine housing- running rail connection (Earthing)	
1. Observe the regulations and guidelines of the relevant railway operator.	
2. Check whether the cable is securely connected to the earthing screw of the point machine.	
E. Opening of switch rail with respect to stock rail at centre of claw lock. Range= 160 +3/-0 mm	
H. Checking of crank handle latch and voltage cut-off switch:	
1. Check whether the slit pins on the transmission components for the crank handle latch are present.	
2. Check whether the latch lever prevents the insertion of the crank handle on the crank handle gear wheel when the voltage cut-off switch is on.	
a) There must be a lateral play of 2 mm to 3 mm between the crank handle gear wheel and the latch lever.	
b) When the voltage cut-off switch is off, it must be possible to insert the crank handle without any difficulty	
c) When the crank handle is inserted, the point machine must not switch on.	
d) No limit switch in the voltage cut-off switch must switch.	
3. Necessary corrections can be performed by adjusting the length of the connecting rod. Adjust the length of the connecting rod using the nut on the fork head.	



I. Checking of secure fit and installation conditions	
1. Check whether the point machine and base plate are securely connected torque of 200NM to be checked at all base plate nuts. Pen mark to be done	
2. Check whether the base plate is securely connected to the ribbed sole-plate.	
3. Check whether split pins are present, except for the prevailing torque type hexagon nut	
4. Check the following:	
a) Is the throw bar cover free of ballast?	
b) Is a point identification plate present in accordance with the layout diagram and can it read?	
c) Is the point machine in alignment with the track and the operating rod?	
d) can The cover not be removed after it has been key-locked?	
e) Pen mark and torque as per ensure at claw lock and all point machine bolts of point machine.	
K. Greasing of throw bar	
1. Grease the part of the throw bar projecting from the point machine housing in the fully extended position.	
2. Grease the part which remains inside the housing in the two end positions of the point machine.	
L. Greasing of ball spindle	
1. Grease the ball spindle in the two end positions of the point machine	
2. Reversing the point machine a number of times as you do so	
M. Greasing of gear wheels	
1. Grease all four gear wheels with the motor stopped.	
2. Grease the bearings of the crank handle coupling unit and the intermediate gear wheel in the event of running noise.	
N. Greasing and oiling of detector slides	
1. Grease all accessible surfaces of the two detector slides with the slide 'out'	
2. Grease all accessible surfaces of the two detector slides with the slides "in".	
3. Oil the contact surface between the detector slides	
4. Through the hole (E) in the upper detector slide in accordance with the point machine version. Left hand version: with detector slides "in" Right hand version: with the detector slides "out"	
O. Oiling of keep-and-detect slides	
1. Oil the keep-and-detect slides through the hole (E) for oiling the keep-and detect slides.	
2. Reversing the point machine a number of times as you do so.	
P. Oiling of shifting plate	
1. Move the point machine to the end position in which the distance between the retention clutch (1) and the transmission clutch is the greatest. The retention clutch is then at one end of the point machine and the	



transmission clutch at the other	
2. Oil the two surfaces for oiling the shifting plate (3) marked with arrows underneath the throw bar (2)	
Q. Checking of cover lock for ease of movement	
1. Check whether the point machine housing can be opened and closed by applying slight pressure on the cover.	
2. Check the bolt hook if the cover lock moves sluggishly.	
3. Apply flake graphite to the lock if it moves sluggishly.	
4. Use a de-icing agent if the lock is frozen.	
R. Greasing of shaft of intermediate and crank handle gear wheels	
1. Undo the bolt (E) of the connecting rod on the reduction gearing	
2. Fold away the latch lever of the crank handle gear wheel.	
3. Remove the shaft retaining clips using circlip pliers.	
4. Remove the thrust ring with crank handle gear wheel or latch lever and intermediate gear wheel.	
5. Apply grease (F) to the cavities in the gear wheels and the shaft.	
6. Mount all parts in reverse order.	
S. Greasing external claw lock components	
1. Move the point machine to its fully extended position.	
2. Grease all accessible surfaces of the coupling rod in both positions	
T. Greasing of ball bearings at ends of ball spindle	
1. Grease (f) the accessible surfaces of the ball bearings at the ends of the ball spindle.	
Remarks	

4.6 Signals Colour light (Half yearly)

	Details of Maintenance activity	
General	Cleaning of aspect housing & LED unit	
	LED functioning	
	Earthing verification	
	Cleaning of MSB	
	Tightening of all Nuts and Bolts	
	Healthiness of all supports, Brackets & Foundation of Signal and Route indicator etc	
	Cleaning of route indicator	
	Route indicator functioning	



	Checking of any obstruction to signal	
Red aspect	Voltage (100V-120V AC)	
	Current (112 - 154 mA)	
Violet aspect	Voltage (100V-120V AC)	
	Current (112 - 154 mA)	
Green aspect	Voltage (100V-120V AC)	
	Current (112 - 154 mA)	
"M" route indicator	Voltage (100V-120V AC)	
	Current	
"D" route indicator	Voltage (100V-120V AC)	
	Current	
"S" route indicator	Voltage (100V-120V AC)	
	Current	
"T" route indicator	Voltage (100V-120V AC)	
	Current	
Condition of Stencil Indicator		
Cleaning of Stencil Indicator		
Cleaning of Route Indicator housing		
Route Indicator functioning		

4.7 Shunt Signals (Half yearly)

	Details of Maintenance activity	
General	Cleaning of aspect housing & LED unit	
	LED functioning	
	Earthing verification	
	Cleaning of SSB	
	Tightening of all Nuts and Bolts	
	Healthiness of all supports, Brackets & Foundation of Signal etc	
	Checking of any obstruction to signal	
Pivot	Voltage (100V-120V AC)	
	Current (52- 58 mA)	
ON	Voltage (100V-120V AC)	



aspect	Current (52- 58 mA)	
OFF aspect	Voltage (100V-120V AC)	
	Current (52- 58 mA)	

4.8 Axel counter heads (Indoor and Outdoor) : YEARLY

Location:		Equipment ID				
		Month				
Schedule: Yearly		Date				
SN	System	Sub System	Maintenance tasks	Details of maintenance task (Long text)	Measurement points	Remarks
1	ACM	Axel counter Cabinet (Indoor)	Visual inspection	a) Surface is clean b) Surface is undamaged (if necessary clean dirt particles using a brush or soft dry cloth) c) Cabinet is tightly fastened to base frame d) Check can be opened and closed easily, Key Locking mechanism. Cabinets earthing.		
			Check cabinets been equipped with the necessary module frames according to the Book of Circuits	a) All ID plugs are present. b) All modules/switches are firmly mounted c) All modules/switches are not damaged.		
			Check cables dressing inside cabinet.	a) Cable dressing done neatly. b) Cable forms don't pass over sharp edges. c) Cables are correctly fixed. d) all cable termination should not be too tight or too loose		
			Check Earthing with correct cable and connected to the MET/CET			



2	Axel counters (Outdoor)	Visual Inspection:	Check all components are fitted securely, check for any damage, check Desiccant bag present or not etc.		
		Inspect earth connection, connecting cables, & labeling, shield connections of cables.			
		Check Axel counters bolts Torque (45Nm)			
		Ensure Paint lock after torqueing.			
		Measure & record voltage present at wheel detector	Nominal Value: 30 V and 72 V DC at a maximum ripple of 3%.	Voltage(V):	
		Perform recalibration of wheel detector if required			
		Check the traversal cycle of wheel detector	Move the test plate in longitudinal direction over the wheel detector and check the response. Wheel traversal must be detected on ACM while doing so.		
		Check and access diagnostic web site using corresponding IP on laptop			

4.9 Axel counter module: TWO YEARLY



4.12 S&T UPS MAINTENANCE RECORD (Quarterly)

DATE		
UPS RATING	BATTERY CAPACITY (AH)	
Cleaning of Battery Terminals		
Checking of Loose Connections		
Checking of any Leakage from Cells		
Average Ambient Temperature (26 to 27 deg C)		
Battery Voltage before Load Test (Volts) and Load Test start time		
Battery Voltage after Load Test (Volts) and Load Test stop time		
Battery Charge (%) after Load Test		
Charging Current after Load Test (Amp)		
Load During Test L1, L2, L3 in KVA for UPS		
Cleaning of Cells		
Remarks		

Cell no	Voltage before discharge	Voltage after discharge
1		
2		
3		
4		
5		
6		
7		
-		
-		
288		



4.13 AP poles with WRU box for DCS and VTS boxes (Half Yearly)

Location:	Equipment Id	
	Month	
Schedule: Half Yearly	Date	
Antenna : Visual inspection		
1. Checking for obvious damages		
2. Checking that all components are firmly mounted.		
AP Cables: For the inspection of cables, the tasks below shall be considered		
1. Making sure they are not under strain.		
2. Checking for severe kinks or insulation damages.		
3. Ensuring they are securely connected on both ends.		
AP Cleaning: The following points outline how to clean the equipment		
1. Cleaning if there is obvious dust or dirt.		
2. Use a dry cloth or a dry soft brush for cleaning.		
3. Front panels, closed housings and cables may also be cleaned with a moist cloth, if required. In this case, pay special attention to electrical safety and make sure no moisture gets into connectors.		
4. Use a PH-neutral detergent if necessary. Do not use detergents containing abrasives or solvents.		
Ensure no trees or other obstacles obstruct the line of sight from the antenna to the trains		
WRU cabinets and equipment inside: General Cleaning		
1. Cleaning is only necessary if there is obvious dust or dirt.		
2. Use a dry cloth or a dry soft brush for cleaning.		
3. Front panels, closed housings and cables may also be cleaned with a moist cloth, if required. In this case, pay special attention to electrical safety and make sure no moisture gets into connectors.		
4. Use a PH-neutral detergent if necessary. Do not use detergents containing abrasives or solvents.		
5. For perforated housings, use a vacuum cleaner to remove dust if necessary.		
WRU PSUs: Check input Voltage		
Use a voltage tester to verify that 230 V AC are present between the N and L terminals of the PSU. If power is present but no LED is lit, replace the PSU. Otherwise, fix all faults associated with the input power supply.		
WRU PSUs: Check output Voltage		
RF cables and splitters: Visual inspection		
1. Checking for obvious damages.		
2. Looking for excessive dirt or burn marks.		
3. Checking that all components are firmly mounted.		
4. Checking that all labels/markings are legible.		
RF cables and splitters: Cables		
1. Make sure they are not under strain.		
2. Check for severe kinks or insulation damages.		
3. Ensure they are securely connected on both ends.		
4. Check that they are correctly labeled.		



5. Observe that they are tidily laid and properly fixed.	
Antenna: Inspection of RF cables, the tasks below shall be considered	
1. Make sure they are not under strain. 2. Check for severe kinks or insulation damages. 3. Ensure they are securely connected on both ends. 4. Check that they are correctly labeled. 5. Observe that they are tidily laid and properly fixed.	
Antenna: General Cleaning: The following points outline how to clean the equipment	
1. Cleaning is only necessary if there is obvious dust or dirt. 2. Use a dry cloth or a dry soft brush for cleaning. 3. Front panels, closed housings and cables may also be cleaned with a moist cloth, if required. In this case, pay special attention to electrical safety and make sure no moisture gets into connectors. 4. Use a PH-neutral detergent if necessary. Do not use detergents containing abrasives or solvents. 5. For perforated housings, use a vacuum cleaner to remove dust if necessary.	
Antenna: Check alignment	

4.14 PDC Cabinets (Half yearly)

Location:		Equipment ID	
		Month	
Schedule: Half yearly		Date	
Maintenance tasks	Details of maintenance task	Action	Remarks
Visual inspection	1. External damage to components		
	2. Proper function of all panel locksets		
	3. Proper function of Voltmeter & Ammeter		
	4. Checking of locks, latches and hinges		
	5. Checking of seals		
Alarm/releasing routine test	Checking insulation resistance IM fault monitoring circuit. IMs for AC/DC network: Press the 'Test/Reset' button for 2 seconds, the Green LED will light up and break the alarm circuit, use Itimeter to check the voltage and record the reading. The IM resumes normal operation after 3 seconds		



Checking voltage relay fault monitoring circuit	Adjust the 'overvoltage' threshold to lower value, this will cause the VR to send alarm signal to energise the auxiliary relay of VR. (VRA...VRE). Measure voltage of terminal blocks 5&6 to be 0V. After each test, adjust the 'overvoltage' threshold to normal setting. (Refer Voltage Relay Menu-Based Operation)		
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4.15 Westrace Cabinets (IXL) (Yearly)

Location:		Equipment ID	
		Month	
Schedule: Yearly		Date	
Maintenance tasks	Details of maintenance task	Action	Remarks
Visual review	Check the cleanliness of the cubicles, both external and internally, paying special attention to the dust or debris accumulated near the electronic modules and the fans. Review that all the doors close and open correctly. Review that every cable is perfectly fitted in the connectors. Check the LEDs in the front of the modules searching for any problem.		
Test redundant modules	1. Change over to the inactive module in each redundant pair.		
	2. Changeover modules again, to verify that the changeover works in both directions.		
Test redundant Power supplies	1. Switch off one of the power supplies		
	2. Check that the only change in the modules is the standalone power indication (24V LED) changing from green to red. Operation of modules should not be affected by the loss of one power supply.		
	3. Switch on the powered-off power supply		
	4. Repeat the process with the other power supply in the redundant pair		
Verify each			



incoming power supply	Some installations may derive power from multiple sources. Verify that the system can operate from each source alone by switching off all other sources. For example, where the supply is derived from several incoming sources:		
	1. Switch off one of them and verify that operation is correct		
	2. Repeat the process for the rest of incoming sources.		
Verify the nominal value of all power supplies	1. Main power supply		
	2. Signalling power supplies		
	a) 110 Vac for LOM110 (85Vac-115Vac)	Voltage (Vac):	
	b) 50 Vdc for ROM50 (42Vdc-60Vdc)	Voltage (Vdc):	
	3. WESTRACE Power Supply (24 Vdc). This should be within these limits: • 24 Vdc nominal (20 - 30 Vdc)	Voltage (Vdc):	
Verify that the earth impedance is below 5Ω	Improve system earthing if impedance is above 5Ω	Impedance (ohm):	
Check that displays work and are readable	Keep them clean		
ECDT Maintenance	Check the cleanliness of the cubicles, both external and internally, paying special attention to the dust or debris accumulated near the electronic modules and the fans. Review that all the doors close and open correctly. Review that every cable is perfectly fitted in the connectors. Check the LEDs in the front of the modules searching for any problem		
	Verify that the earth impedance is below 5Ω. Improve system earthing if impedance is above 5Ω.		
	ECDT Maintenance: Check that displays work and are readable. Keep them clean.		



4.16 TGMT Cabinets) (Yearly)

Location:		Equipment ID	
		Month	
Schedule: Yearly		Date	
Maintenance tasks	Details of maintenance task	Action	Remarks
1. Visually check	cabinets and equipment, look for signs of damage and insecurity		
2. Check all exposed cables and connections	are secure and free of damage or deterioration		
3. Check the LEDs	the modules installed in the individual frames [Simis ECC & Simis PC (XR)]		
4. Check whether the rack is protected against unauthorized access			
5. Check all plugs / screws and fasten them, if necessary			
6. Dusting	Dust off all modules, components, frames, display of HMI etc. with a dry and soft cloth or a dry and soft brush.		
7. General Cleaning (Exterior)			

4.17 ATS Cabinets (Half Yearly)

Location:		Equipment ID			
		Month			
Schedule: Half yearly		Date			
System	Sub System	Maintenance tasks	Details of maintenance task (Long text)	Measurement points	Remarks
ATS	ATS Workstation	Routine Cleaning	Clean the case of the equipment and the fan filters		
		Check software	by using command rpm -qa grep rail9000		



		version			
		Verify that all the modules are alive and in execution.	Opening an VNC connection to the equipment and observing that all the modules in the module layout are in green color		
		Verify logs for every process module that runs in the server.	They are located in: /usr/local/ControlCenters/Rail9000/logs		
		Verify control transfer from OCC/BOC C to interlocking stations and vice versa			
		Reboot system once using reboot command in supervisor mode.			
	ATS Servers(IxL manager, EIS,ATR,ARS)	Check software version of ATS	Check software version by using command rpm -qa grep rail9000		
		Verify that all the modules are alive and in execution.	Opening an VNC connection to the equipment and observing that all the modules in the module layout are in green color		
		Verify logs for every process module that runs in the server.	They are located in: /usr/local/ControlCenters/Rail9000/logs		



	Verify control transfer from OCC/BOC C to Local and vice versa		
	Reboot system once using reboot command in supervisor mode.		

4.18 DCS cabinets (copy from TGMT)

Location:		Equipment ID	
		Month	
Schedule: Yearly		Date	
Maintenance tasks	Details of maintenance task	Action	Remarks
1. Visually check	cabinets and equipment, look for signs of damage and insecurity		
2. Check all exposed cables and connections	are secure and free of damage or deterioration		
3. Check the LEDs	the modules installed in the individual frames [Simis ECC & Simis PC (XR)]		
4. Check whether the rack is protected against unauthorized access			
5. Check all plugs / screws and fasten them, if necessary			
6. Dusting	Dust off all modules, components, frames, display of HMI etc. with a dry and soft cloth or a dry and soft brush.		



7. General Cleaning (Exterior)			
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4.19 Onboard TGMT (Quarterly)

SL No	Inspection & Maintenance Job	Status(Pass/Fail)
A	Balise Antenna: General visual inspection, Visual inspection of general condition of balise antenna	
1	Check of the equipment mounting	
2	Measure the antenna height from rail head	
3	Ensure that all cable connections are secure, not under strain	
B	OPG: General visual inspection, Visual inspection of general condition of OPG	
1	Check for visible damage	
2	Check of the equipment mounting	
3	ensure that all cable connections are secure, not under strain	
C	RADAR : General visual inspection, Visual inspection of general condition of Radar	
1	Check of the assembly area related to apparent damages outside the cabinet and inside of the cabinet	
2	Check for visible damage	
3	Check of the equipment mounting	
4	Ensure that all cable connections are secure, not under strain	
D	All grounding connections : General visual inspection	

4.20 Onboard TGMT (Half Yearly)

SI No.	Inspection & Maintenance Job	Status(Pass/Fail)
A	OBCU ATO/ITF Subrack : General visual inspection	
1	Check of the assembly area related to apparent damages outside the cabinet and inside of the cabinet	
2	Check for visible damage	
3	Check of the equipment mounting	
4	Check if component markings are legible	
5	ensure that all cable connections are secure, not under strain	



6	ensure that the plugs, pull reliefs and connections (securely fastened)	
7	Check the conditions of the electronic equipment	
8	Check if modules are properly fixed to frame and if the frame is properly	
9	Check the conditions of the electronic printed circuit modules / units installed inside the OBCU ATO/ITF	
10	Check the status of LEDs of the modules installed in the individual frames or front panels	
B	Fan : General visual inspection , Monitoring of general condition of fan	
	Check the status of LEDs of the modules installed in the individual frames or front panels	
C	OBCU ATP Subrack :General visual inspection	
1	Check of the assembly area related to apparent damages outside the cabinet and inside of the cabinet	
2	Check for visible damage	
3	Check of the equipment mounting	
4	Check if component markings are legible	
5	ensure that all cable connections are secure, not under strain	
6	ensure that the plugs, pull reliefs and connections (securely fastened)	
D	Distributor: General visual inspection	
1	Check of the assembly area related to apparent damages outside the cabinet and inside of the cabinet	
2	Check for visible damage	
3	Check of the equipment mounting	
4	Check if component markings are legible	
5	ensure that all cable connections are secure, not under strain	
1	ensure that the plugs, pull reliefs and connections (securely fastened)	
E	HMI : General visual inspection , If the surface or the frame is dirty, must be cleaned with a cloth, and neutral cleaning agent.	
1	Check the status of LEDs of the modules installed in the individual frames or front panels	
F	Cables : General visual inspection	
1	ensure that all cable connections are secure	
2	ensure that the cables are not under strain	
G	All grounding connections : General visual inspection	
1	ensure that all cable connections are secure	



4.21 CHK (Yearly)

Location:		Equipment ID	
		Month	
Schedule: Yearly		Date	
Maintenance tasks	Details of maintenance task (Long text)	Action	Remarks
Visual inspection	1. Visually inspect the CHK unit signs of damage. 2. Verify labelling of CHK unit		
Measure voltage between electrical contact	1. Check electrical contacts of the CHK unit (Refer connection diagram)		
	2. Measure voltage between electrical contact (Vdc= 50V Contact No. 1&2 at CHK end) (Refer connection diagram)		
Functional Check (Operational check)	1. Perform functional check of crank handle unit to ensure that the key is Properly releasing or not.		
	2. Operate the crank handle unit from LATS/VDU & check crank handle "IN" & "OUT" indication		
General Cleaning (Exterior)	Clean the external parts of the CHK unit with cloth and wipe off the dust.		

4.22 Balise (Yearly)

Location:	Equipment Id	
	Month	
Schedule: Yearly	Date	
Visual Inspection & General Cleaning		
1. Check Balise Condition, Damaged or undamaged, metal free surface, alignments. 2. Perform General Cleaning of the exterior of the Eurobalise.		
Torque Check		



1. Check Balise bolts Torque (100Nm for Viaduct) 2. Check tightening of Steel Strips (Ballasted section balise)	
Paint Marking	
Put the torque verification mark with permanent marker.	
Remarks	

4.23 PDC (Half yearly)

Location:		Equipment ID	
		Month	
Schedule : Half yearly		Date	
	Details of maintenance task	Action	Remarks
Visual inspection	1. External damage to components		
	2. Proper function of all panel locksets		
	3. Proper function of Voltmeter & Ammeter		
	4. Checking of locks, latches and hinges		
	5. Checking of seals		
Alarm/releasing routine test	Checking insulation resistance IM fault monitoring circuit. IMs for AC/DC network: Press the 'Test/Reset' button for 2 seconds, the Green LED will light up and break the alarm circuit, use Itimeter to check the voltage and record the reading. The IM resumes normal operation after 3 seconds		
Checking voltage relay fault monitoring circuit	Adjust the 'overvoltage' threshold to lower value, this will cause the VR to send alarm signal to energise the auxiliary relay of VR. (VRA...VRE). Measure voltage of terminal blocks 5&6 to be 0V. After each test, adjust the 'overvoltage' threshold to normal setting. (Refer Voltage Relay Menu-Based Operation)		



4.24 PDC (Yearly)

Location:		Equipment ID	
		Month	
Schedule: Yearly		Date	
	Details of maintenance task	Action	Remarks
General Visual inspection	Inspect thoroughly all the compartments and remove any foreign bodies. If necessary, clean the compartments with a vacuum cleaner or a brush, including the terminals, connection areas and isolating supports. Caution: Use of compressed air is forbidden. Make sure that there is no condensation. Any mark of permanent humidity should be detected and eliminated. If required, replace any damaged door seal.		
Presence and appearance of covers	Make sure that any covers (on the connection terminal bars, on auxiliary equipment such as voltage transformers, etc.) are present, and that they are properly fastened. Replace any missing or damaged covers.		
Appearance of connections	Make sure that there is no heating mark on the bar terminals and the outgoing power connection areas, and on the cable sockets.		
	a. Make sure that there are no pinholes or pits on the contact points.		
	b. Any cause of heating should be detected, recorded and eliminated.		
	C. careful examination should be carried out to the corresponding unit.		
Appearance of the isolating supports	D. make sure that the external power and control cables are properly fastened. They should not show any strain on the connection areas or the terminals.		
	Check the appearance of isolating supports (for bus bars and connection terminal bars). If it is slightly brown, this is a sign of overheating. If so, replace the parts in question, and eliminate the cause of heating. Detect any breakage, cracking or creeping marks and change the corresponding part		



Tightening of the connections	The tightening devices of connections, with double locking system (for example: "Contact" serrated conical lock washer + hexagonal self-locking nut) used by manufacturer do not need periodic refastening. The nuts or screw heads of bus bar are fitted with red paint as torque mark for visual inspection. Any nut or screw with a damaged torque mark should be re-fastened/replaced.		
Protection Circuit Inspection	Check earth bar and/or conductor are properly connected in the PDC. (i.e. check that there is no loose cable connection to the PDC earth bar)		
	Check the ground/earth connections at the earth bar of the PDC (i.e. check the earth cable connection between the first PDC cubicle earth bar and SE room Main earth Terminal (MET).		
	check the ground/earth bonding connections of the flexible elements. (i.e. doors).		
	Check all grounding connections of the secondary current transformer		
	Measuring earthing continuity*.		
	*Use the multimeter to measure the continuity of the ground/earth circuits between PDC earth bar and main Earth Terminal (MET) that are housed within the same SE/PSD room. Expected value of grounding connections is less than or equal to 1 Ω .		
Functional Check	In the event if the measured value exceeded 1 Ω , corrective action need to perform by checking all earth connections between PDC and MET		
	The purpose is to ensure that all the systems and routine operations are as per the PDC circuit wiring diagrams		
	1. Check each circuit function and components. Ensure all voltage measurement shall be within +/- 5% of nominal voltage.		
	2. Any abnormality noted during the checking shall be cleared before the equipment is put back into operation again.		



4.25 Onboard Equipment (weekly)

Train Set				TS#	
Cab No.				Cab1	Cab2
S.No.	CARD / RELAY	INDICATION	NORMAL STATUS		
1	Power supply checks of OBCU_ATP	LED indications	Ok		
2	Vital Input checks	LED indications	Ok		
3	Power supply checks of OBCU_ATO/ITF	LED indications	Ok		
4	Interface checks with HMI and Onboard Airlink	LED indications	Ok		
5	Interface checks with RS (if any)	LED indications	Ok		
6	Fuses condition checks at Distributor rack	-	Ok		

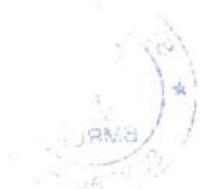
4.26 Airlink Tracksides (Yearly)

4.27 VTS (Quarterly)

4.28 VTS (Half yearly)

4.29 LVS (Quarterly)

Maintenance tasks	Details of maintenance task (Long text)	Measurement points
Cleaning and Replacing the Sponge	Dust cleaning	
Delta Video Controller & Screen	1. Check power supply status. 2. Check Visually for redundancy	
Hard Disk (Controller)	Check hard disk occupancy rate	
LVS Screen	Inspect and clean the screens	



4.30 LVS (Half yearly)

4.31 Marker Board (Yearly)

Schedule: Yearly	Date	
1. Visual Inspection & General Cleaning if necessary clean dirt particles using a brush or soft dry cloth		
2. Check the condition of Sticker if weared off, peel off the old sticker, wipe off the surface with soft dry cloth and fix the similar new		
3. Check the tightness of nut and bolts,		

NOTE: Chek lists which are not available will be provided in later stage.



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SECTION-IX
PROFORMA OF BANK
GUARANTEES



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PROFORMA - A
FORM OF BANK GUARANTEE FOR TENDER SECURITY /
EARNEST MONEY DEPOSIT

(Reference ITT clause 14)

(To be stamped in accordance with Stamp Act, if any, applicable for the issuing bank)

To,

BANGALORE METRO RAIL CORPORATION LIMITED (BMRCL)

Admin Building, Baiyappanahalli Depot,

Old Madras Road, Near NGEF Bus Stop,

Baiyappanahalli, Bangalore - 560 038.

Karnataka, India.

1. **WHEREAS** _____ [Name and Address of the Tenderer] (hereinafter referred to as the "Bidder" or "Tenderer") has undertaken for submission of Tender in pursuance of Tender Notification No. _____ for _____ [Name of the Works] (hereinafter referred to as the "Bid" or "Tender").
2. **AND WHEREAS** it has been stipulated in the Tender issued by Bangalore Metro Rail Corporation Limited (BMRCL) (hereinafter referred to as the "Employer" or "BMRCL") that the Tenderer shall furnish to Employer an unconditional and irrevocable Bank Guarantee from an Indian Scheduled Bank (excluding Cooperative Bank) or from a Scheduled Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with second schedule, for the sum specified herein below as Tender Security(EMD) for compliance of the obligations in accordance with the Tender conditions. In pursuance to this, M/s _____ has requested for issuance of the Bank Guarantee for the sum specified herein below as Tender security (EMD).
3. **AND WHEREAS** we _____ [Name and full address of the Bank including Email address] having registered office at _____ (hereinafter referred to as the "Bank"), which expression shall unless repugnant to the context or the meaning thereof, include its successors, administrators, executors, assignees, do hereby agree to give the Employer such a Bank Guarantee drawn and payable at Bengaluru _____ branch on behalf of the tenderer.
4. **NOW therefore**, the Bank hereby affirm that it is the guarantor and responsible to 'Employer' and their successors, on behalf of the 'Tenderer' up to a total sum of INR/Foreign Currency/ies _____ [the amount of Guarantee to be specified in figure and words in the respective currency/ies as specified in the Tender document]. Further, the Bank hereby unconditionally, irrevocably and without demur undertake to immediately pay, the Employer upon the Employer's first written demand and without cavil, or arguments any sum or sums within the limits of the sum specified in this Bank Guarantee as aforesaid without the Employer being required to prove or to show grounds or reasons for the demand, by depositing/crediting to the Current Account of the Employer, the sums specified herein.
5. This Bank Guarantee is encashable at our designated Branch as mentioned below:
 Name of the Bank, Branch and contact details Address Telephone no: & Fax No: E-mail Address



Branch Manager/s name & mobile No: Bank Zonal Office Address, Telephone No, Fax Number, E-mail Address: _____

OR

This e- Bank Guarantee shall be encashable at the issuing branch of the Bank through NeSL portal.

6. The Bank hereby confirms that the Bank is on the SFMS (Structural Finance Messaging System) platform and shall invariably send an advice of the Bank Guarantee to the designated Bank of the Employer as given below:

Sl. No.	Particulars	Details
i	Name of Beneficiary	Bangalore Metro Rail Corporation Limited
ii	Name of Bank	Bank of India
iii	Branch	Cantonment Branch, Bengaluru.
iv	Address of Branch	49, Jyothi Mahal, St. Mark's Road, Bangalore - 560001
v	Account No.	840420110000760
vi	IFSC Code:	BKID0008404

7. This Bank Guarantee shall be encashed at the demand of the Employer on or before the due date.
8. The Employer shall have full rights to encash this bank guarantee at any time during the validity period and the 'Tenderer' shall have no right or claim whatsoever in the matter of encashment of the Bank guarantee amount by the 'Employer'. The Bank will be fully responsible in terms of the guarantee and obligation, to make immediate payment to 'Employer', without the consent of the Tenderer and without referring the matter to the 'Tenderer'.
9. The Bank will deliver the money required by the 'Employer' immediately on demand without delay without reference to the 'Tenderer' and without the necessity of a previous notice or of judicial or administrative procedures and without it being necessary to prove to the Bank the liability or damages resulting from any defects or shortcomings or debts of the 'Tenderer'.
10. Courts at Bengaluru, Karnataka, India shall have exclusive jurisdiction for adjudicating the disputes arising out of the encashment of the Guarantee, and, the said Bank undertakes not to revoke this Guarantee during its currency, except with the previous consent of the 'Employer' in writing and agree that any change in the constitution of the Bank shall not discharge its liability hereunder.
11. This Bank Guarantee will not be discharged due to the change in the constitution of the 'Tenderer' or change in the constitution of the bank.
12. This Deed of guarantee is signed and executed by Shri/Smt _____ and Shri/Smt _____ who is/are authorized by the Bank for issuing the guarantee on its behalf and their ID No/s. and Email address/es being _____ & _____ and _____ & _____ respectively.



13. The Bank's liability under this Guarantee shall not exceed the amount of _____ [Indian Rupees/Foreign Currency/ies to be specified in words and figures].
14. This guarantee shall be valid till _____ [Date to be mentioned].
15. The pendency of any dispute or arbitration or other proceedings shall not affect this guarantee in any manner.
16. It is hereby agreed that the liability of the Bank under this guarantee shall cease on whichever of the following events first occurs.
- a) Payment by the Bank of the guaranteed sum in full to the 'Employer',
or
- b) Receipt of written communication from the 'Employer' to the Bank along with the original Bank Guarantee discharging the Bank of its liability covered by this Bank Guarantee. In case of electronic Bank Guarantee (e-BG), release/discharge of eBG by the Employer through NeSL Portal.

SIGNATURE AND SEAL OF THE GUARANTOR

DATE: _____

NAME OF THE BANK: _____

ADDRESS: _____

Note:

1. The stamp paper of appropriate value shall be purchased in the name of the bank, who issues the 'Bank Guarantee'.
2. The above format shall be used for e-Bank Guarantee also.
3. For e-BG, the Entity Number of BMRCL is 'AAACB4881D'.
4. Tender No. shall be the reference to be stated in the e-BG.



PROFORMA – B
FORM OF BANK GUARANTEE FOR PERFORMANCE SECURITY

(Refer GCC clause)

(To be stamped in accordance with the Stamp Act of the Country of Issuing Bank)

To

BANGALORE METRO RAIL CORPORATION LIMITED (BMRCL)
 Admin Building, Baiyappanahalli Depot,
 Old Madras Road, Near NGEF Bus Stop,
 Baiyappanahalli, Bangalore - 560 038.
 Karnataka, India.

1. **WHEREAS** _____ [Name and Address of the Contractor] (hereinafter referred to as the "Contractor") has undertaken for due performance of the Contract, in pursuance of LoA/Contract No. _____ for _____ [Description of the Contract work to be specified] (hereinafter referred to as "the Contract"). The Contract was awarded by Bangalore Metro Rail Corporation Limited (hereinafter referred to as the "Employer" or "BMRCL"), which expression shall unless repugnant to the context or the meaning thereof, include its successors, administrators, executors and assignees, to the Contractor.
2. **AND WHEREAS** it has been stipulated in the Contract that the Contractor shall furnish to the Employer with an unconditional and irrevocable Bank Guarantee for *Performance Security* for the sum specified herein below as security for *compliance of the obligations and performance of the Contractor*. In pursuance to this M/s. _____ (the Contractor) has requested for issuance of the Bank Guarantee for the sum specified herein below.
3. **AND WHEREAS we** _____ [Name and full address of the Bank including Email address] having registered office at _____ (hereinafter referred to as the "Bank"), which expression shall unless repugnant to the context or the meaning thereof, include its successors, administrators, executors, assignees, and the correspondent Bank hereby agrees to give the Employer on behalf of the Contractor such a Bank Guarantee drawn and payable at Bengaluru branch.
4. **NOW therefore**, the Bank hereby affirm, that it is the guarantor and is responsible to the Employer and their successors, on behalf of the Contractor 'up to a total sum of _____ [the amount of Guarantee to be specified in figure and words in the respective currency/ies in which the contract price is payable]. Further, the Bank hereby unconditionally, irrevocably and without demur undertake to immediately pay, the Employer upon the Employer's first written demand and without cavil, or arguments any sum or sums within the limits of the sum specified in this Bank Guarantee as aforesaid without the Employer being required to prove or to show grounds or reasons for the demand, by depositing/crediting to the Current Account of the Employer, the sums specified herein.
5. This Bank Guarantee is encashable at the Issuing Bank's designated Branch in Bengaluru,



Karnataka, India as mentioned below:

Name of the Bank, Branch and contact details, Address, telephone no: & Fax No: E-mail Address
Branch Manager/s name & Mobile No: Bank Zonal Office Address, Telephone No, Fax Number, E-mail Address: _____

OR

This e- Bank Guarantee shall be encashable at the issuing branch of the Bank through NeSL portal.

6. The Bank hereby confirms that the Bank is on the SFMS (Structural Finance Messaging System) platform and shall invariably send an advice of the Bank Guarantee to the designated Bank of the Employer (Bangalore Metro Rail Corporation Limited) as given below:

Sl. No.	Particulars	Details
i	Name of Beneficiary	Bangalore Metro Rail Corporation Limited
ii	Name of Bank	Bank of India
iii	Branch	Cantonment Branch, Bengaluru.
iv	Address of Branch	49, Jyothi Mahal, St. Mark's Road, Bangalore – 560 001
v	Account No.	840420110000760
vi	IFSC Code:	BKID0008404

7. This Bank Guarantee shall be encashed at the demand of the Employer on or before the due date.
8. The Employer shall have rights to encash this Bank Guarantee at any time during the validity period and the 'Contractor' shall have no right or claim whatsoever in the matter of encashment of the Bank Guarantee amount by the 'Employer'. The Bank will have their responsibility in terms of the guarantee and obligation, to make immediate payment to the 'Employer', without the consent of the 'Contractor' and without referring the matter to the 'Contractor'.
9. The Bank shall be liable to pay the 'Employer', any amount up to and inclusive of the aforementioned full amount upon written order from the 'Employer' to indemnify the 'Employer' for any liability or damage resulting from any defects and/or shortcomings of the 'Contractor' and/or the debts the 'Contractor' may have incurred with the 'Employer' and/or any parties involved in the Works under the Contract mentioned above, whether these defects and/or shortcomings and/or debts are actual and/or estimated and/or expected. The Bank will deliver the money required by the 'Employer' immediately on demand without delay without reference to the 'Contractor' and without the necessity of a previous notice or of judicial or administrative procedures and without it being necessary to prove to the Bank the liability or damages resulting from any defects or shortcomings or debts of the 'Contractor'.
10. Courts at Bengaluru, Karnataka, India shall have exclusive jurisdiction for adjudicating the disputes arising out of the encashment of the Guarantee, and, the said Bank undertakes not to revoke this Guarantee during its currency, except with the previous consent of the 'Employer' in writing and



agree that any change in the constitution of the Bank shall not discharge its liability hereunder.

11. This Bank Guarantee will not be discharged due to the change in the constitution of the 'Contractor' or change in the constitution of the Bank.
12. This Deed of guarantee is signed and executed by Shri/Smt _____ and Shri/Smt _____ who is/are authorized by the Bank for issuing the guarantee on its behalf and their ID No/s. and Email address/es being _____ & _____ and _____ & _____ respectively.
13. The Bank's liability under this Guarantee shall not exceed the amount of _____ [Indian Rupees/Foreign Currency/ies to be specified in words and figures].
14. This Bank guarantee shall be valid till _____ [Date to be mentioned].
15. The pendency of any dispute or arbitration or other proceedings shall not affect this guarantee in any manner.
16. It is hereby agreed that the liability of the Bank under this guarantee shall cease on the happening of any of the following events:
 - a) Payment by the Bank of the Guaranteed sum in full to the 'Employer',
or
 - b) Issue of written communication by the Employer, to the Bank, along with the original Bank Guarantee discharging the Bank of its liability covered by this Bank Guarantee. In case of electronic Bank Guarantee (e-BG), release/discharge of e-BG by the Employer through NeSL Portal.

SIGNATURE AND SEAL OF THE GUARANTOR

DATE: _____

NAME OF THE BANK: _____

ADDRESS: _____

Notes:

1. The stamp paper of appropriate value shall be purchased in the name of the bank, who issues the 'Bank Guarantee'.
2. The Bank Guarantee to be submitted shall be got issued from an Indian Scheduled Bank (excluding Cooperative Bank) or from a Scheduled Foreign Bank as defined in Section 2(e) of RBI Act 1934 read with second schedule.
3. The above format shall be used for e-Bank Guarantee also.
4. For e-BG, the Entity Number of BMRCL is 'AAACB4881D'.
5. Tender No. shall be the reference to be stated in the e-BG.



SECTION-X ANNEXURES



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SECTION X : ANNEXURES

ANNEXURE 1 – FORM OF CONTRACT AGREEMENT

ANNEXURE 2 – CHECKLIST

ANNEXURE 3 – DETAILS OF BANK ACCOUNT FOR REFUND OF EMD

ANNEXURE 4 – FORMAT OF DECLARATION TOWARDS DEBARMENT / BLACKLISTING

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ANNEXURE 6 – FINANCIAL DATA

ANNEXURE 7 – FORM FOR SEEKING PRE-BID CLARIFICATION ON TENDER DOCUMENT

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ANNEXURE- 1 FORM OF CONTRACT AGREEMENT

CONTRACT NO.

.....(*Name of the Works*).....

This **Contract Agreement** (hereinafter referred to as the "**Contract**") is made at Bangalore on the ____ day of _____ by and between:

BANGALORE METRO RAIL CORPORATION LIMITED, a Public Limited Company incorporated under Companies Act 1956 and a 50:50 Joint venture of Government of India and Government of Karnataka formed for the purposes of execution of a Mass Rapid Transit System in the city of Bengaluru, represented herein by its Company Secretary, authorized to sign and bind the Company, with its registered and corporate office located at III Floor, BMTC Complex, K.H. Road, Shanthinagar, Bengaluru 560 027, Karnataka, India hereinafter referred to as the "**BMRCL**" or the "**Employer**", as the case may be, which expression shall unless excluded by or repugnant to the context or meaning thereof be deemed to include its successors and assigns, of the one part,
and

M/s.(*name of the Contractor*)....., a(*legal status*) Company incorporated under Companies Act 1956, having its office at(*Contractor's office address*)....., represented herein by Mr.(*name and designation of the representative*)....., authorized to sign and bind the Company under the Power of Attorney dated and the Board Resolution dated, who shall be responsible to the Employer under the **Contract No.** for "**.....(*Name of the Works*).....**", hereinafter referred to as the "**Contractor**", which expression shall unless excluded by or repugnant to the context or meaning thereof be deemed to include its successors and assigns, of the other part.

Hereinafter, **BMRCL/Employer** and **Contractor** are collectively referred to as "**Parties**" and individually as "**party**".

WHEREAS, the Employer invited Tenders for Contract No. vide notification no. dated and the Contractor has in response submitted a Tender for "**.....(*Name of the Works*).....**" (hereinafter referred to in this Agreement as "**the Works**") and agrees to undertake performance of the Works under the terms and conditions set forth in this Contract.

AND WHEREAS, the Contractor emerged as the successful Tenderer and the Employer awarded the Contract to the Contractor and the Contractor agrees for "**.....(*Name of the Works*).....**" under the terms and conditions specified in this Contract and other Documents, forming part thereof.

NOW THEREFORE THE PARTIES HEREBY AGREE AS FOLLOWS:

Clause 1 Words and Expressions:

In this Contract all the words and expressions shall have the same meaning as are respectively assigned to them in the conditions of Contract hereinafter referred to.

Clause 2 The Contract Documents:

2.1 The following shall be deemed to form and be read and construed as a part of this Contract Agreement.



- a) Letter of Acceptance No. Dated:
- b) The Tender (Bill of Quantities / Pricing document)
- c) Instruction to Tenderers/ Bidders
- d) General Conditions of Contract
- e) Special Conditions of Contract
- f) Bid Forms/ Tender Forms
- g) Technical Specifications including scope of work
- h) Drawings
- i) Employer's clarifications to Pre-bid Queries and Addendum No..... dated
- j) Contractor's 'Qualification cum Technical' and Financial proposals submitted vide letter no. dated
- k) All correspondence between the Tenderer/ Bidder and BMRCL from the date of issue of NIT till the date of issue of LOA.
- l) Performance Security in the form of Bank Guarantee issued by(name & address of the issuing bank), vide BG No. dated amounting to valid upto
- m) Any other document forming part of this Contract.

2.2 All of the foregoing documents, together with this Contract Agreement, are referred to herein as the Contract. Also incorporated into the Contract, and made part hereof, are all codes, standard specifications, and similar requirements that are referred to therein. In the event of a conflict, inconsistency, ambiguity or discrepancy between the contents of the Contract, the order of precedence shall be according to the General Conditions of Contract.

Clause 3 Integration

The Employer and the Contractor agree that this Contract Agreement, together with the other Contract Documents, expresses all of the agreements, understandings, promises, and covenants of the parties, and that integrates, combines, and supersedes all prior and contemporaneous negotiations, understandings, and agreements, whether written or oral and that no modification or alteration of the Contract Documents shall be valid or binding on either party, unless expressed in writing and executed with the same formality as this Contract Agreement, except as may otherwise be specifically provided in the Contract Documents.

Clause 4 Contract Price and Completion Time:

The Contract price (inclusive of all applicable taxes and duties including tax to be deducted at source as per clause 28 of General Conditions of Contract and respective Special Conditions of Contract) and completion time for executing the works under the Contract are as below:

.....

Clause 5 Obligations of the Contractor:

The mutual rights and Obligations of the Employer and the Contractor shall be as set forth in the Contract and in particular:-

- a) The Contractor agrees, subject to the terms and conditions of the Contract, to perform efficiently and faithfully all of the Works of " name of the work....." under the Contract including(brief scope of works)..... requisite for or incidental to the successful completion of the Works and in carrying out all duties and obligations imposed by the Contract.



- b) The Contractor shall ensure full compliance with Tax laws of India with regard to this Contract and shall be solely responsible for the same. He shall submit copies of acknowledgements evidencing filing of returns and shall keep the Employer fully indemnified against liability of tax, interest, penalty etc, of the Contractor in respect thereof, which may arise.

Clause 6 Obligation of the Employer:

The Employer agrees, subject to the terms and conditions of the Contract to pay Contractor the amount specified and at the rates and terms and in the manner set forth in the Contract.

Clause 7 Governing Law

This Contract shall be construed/interpreted and enforceable under the applicable laws of the Republic of India.

Clause 8 Language

This Contract Agreement and other Contract Documents are made in English language.

Clause 9 Notices

All Notices called by the terms of the Contract shall be in writing in English Language and shall be delivered by hand or by registered mail with acknowledgement due. All notices shall be deemed to be duly made by the party to whom it is addressed at the following address or such other address in India as such Party may subsequently notify to the other.

To Employer:

Bangalore Metro Rail Corporation Ltd.

III Floor, BMTC Complex,
K.H. Road, Shanthinagar,
Bangalore – 560 027
KARNATAKA, INDIA.

To Contractor:

.....
.....
.....
.....
.....

Clause 10 Jurisdiction of Court

The Courts at Bengaluru shall have exclusive jurisdiction in respect of all the disputes arising out of this Contract Agreement between the Parties.



IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names by the hands of their authorized representatives on the day and date first above written.

For

**Bangalore Metro Rail Corporation Limited
(EMPLOYER)**

For
(CONTRACTOR)

(.....)
Company Secretary

(.....)

Witness:

Witness:

(.....)

(.....)

Note:

- * *This Contract Agreement form may be modified as considered necessary at the time of finalization /signing of the Contract Agreement.*
- ** *Blanks to be filled by the BMRCL at the time of finalization of the Form of Agreement.*



ANNEXURE –2**CHECK LIST****

- (A) The following check list is intended to help the Tenderers in submitting offer which are complete. An incomplete offer is liable to be rejected. Tenderers are advised to go through the Tender documents and the list carefully and take necessary action.
- (B) Tenderers are also required to submit/upload copy of the checklist, duly marked, along with their offer.

The Tender submittals shall consist of the following:

I	QUALIFICATION CUM TECHNICAL PACKAGE	
a.	Earnest Money Deposit (Clause 14 of ITT)	Paid / Not paid
b.	Form of Tender on firm's Letter head (Clause 10 of ITT)	Submitted / Not Submitted
c.	Notarized Power of Attorney (Clause 15.2 of ITT) / Attested copy of the Partnership deed / Ownership record to demonstrate the authority to sign the Tender submittals.	Submitted / Not Submitted
d.	Untampered Tender Document uploaded by BMRCL in e-procurement portal (along with Employer's clarification and addenda if any, duly signed and stamped on each page)	Submitted / Not Submitted
e.	Evidence of 'Tenderer's Eligibility and Qualification Criteria (Clause 2 & 3 of ITT) and Qualification Information (Section III) with CA's certifications.	Submitted / Not Submitted
f.	Copy of PAN card	Submitted / Not Submitted
g.	Copy of GST Registration Certificate	Submitted / Not Submitted
h.	EPF, ESI, Labour License	Submitted / Not Submitted
i.	NOT USED	
j.	NOT USED	
k.	Annexure-4: Declaration towards Debarment/Blacklisting	Submitted / Not Submitted
l.	Annexure-5: Undertaking as per prescribed Proforma given in in Section-X	Submitted / Not Submitted
m.	NOT USED	
n.	Bank Details in prescribed Proforma given in Annexure-3 in Section-X	Submitted / Not Submitted
o.	Certificate for Eligible Source Countries as per proforma given in Annexure-8 in Section-X.	Submitted / Not Submitted
II	FINANCIAL PACKAGE	
a	'Pricing document (Bill of Quantities)' through eProcurement Portal as per Instructions for completing the Pricing Document, Section-XI and ITT Clause 10 of ITT.	Submitted / Not Submitted

Note to the Tenderer:

**** The above list is not exhaustive, any other document/s which are required as per the Tender document shall be submitted.**

Note to the TIA:# - If any other documents are required, the same shall be listed.



ANNEXURE - 3

DETAILS OF BANK ACCOUNT FOR REFUND OF EMD

- Name of the Firm/Tenderer:
- Name of the account to which amount to be remitted:
- Complete Address:
- Name of the Bank:
- Branch:
- Address of the Bank Branch:
- Account Type:
- Account Number:
- IFSC Code of the Bank Branch:
- MICR Code of the Bank Branch:
- Whether a cancelled Cheque of the Tenderer/Firm is submitted: Yes or No (please tick)

Certified that the information furnished above is correct.

Signature of the Tenderer



ANNEXURE – 4
FORMAT OF DECLARATION TOWARDS DEBARMENT / BLACKLISTING

We, M/s. [Name of the Tenderer]....., herein after called " the Tenderer", do hereby affirm and declare that we have NOT been Black listed /Debarred by any Government / Government undertaking / semi Government / Govt. Controlled Institutions/projects in India as on the date of Tender submission.

In case it is found that above statement is not true, any time during effect of this Tender or currency of the Contract entered between the parties based on the above statement, BMRCL reserves its rights to terminate the Contract and forfeit the Tender Security / Performance Security at its discretion.

Place:

Signature of the Tenderer

Date:

Name
Designation
Seal of the Company
Phone



**ANNEXURE – 5
UNDERTAKING**

We, M/s..... [Name of the Tenderer]....., herein after called "the Tenderer", do hereby affirm and undertake to abide by all the terms, conditions and specifications given in the Tender document while performing the contractual obligations relating to[name of work]..... of BMRCL, Bangalore.

We do hereby affirm and undertake to follow all labour laws that are applicable from time to time.

We also undertake that the Tender submittals do not contain any w or amendment or modification or change of any type whatsoever with regard to tender conditions and specifications.

Place:

Signature of the Tenderer

Date:

Name
Designation
Seal of the Company
Phone



ANNEXURE-6 FINANCIAL DATA

Tenderer must fill in this form

Tenderer's name..... Date.....

Page of..... pages

S.N.	Description	Financial Data for Latest Last five (5) Years (in INR)				
		2019-20	2020-21	2021-22	2022-23	2023-24
1	Total Assets					
2	Current Assets					
3	Total Liabilities					
4	Current Liabilities					
5	Total revenue					
6	Profits before Interest & Taxes					
7	Profits before taxes after Interest					
8	Profits after Taxes					
9	Net Worth*					
10	Working Capital [=2 – 4]					
11	Cash Flow from operating activities					
12	Annual Turnover					

***Net worth** means the aggregate value of the paid-up share capital and all reserves created out of the profits and securities, premium account after deducting the aggregate value of the accumulated losses, deferred expenditure and miscellaneous expenditure not written off, as per the audited balance sheet, but does not include reserves created out of revaluation of assets, write-back of depreciation and amalgamation.

- Attached copies of the audited balance sheets, including all related notes, income statements for the last five years, as indicated above, complying with the following conditions.
 - If a tenderer (or member of a group) is wholly or significantly owned by a holding or parent company/ies, the information relating to audited accounts and financial statement shall be provided for such intermediate or ultimate holding or parent companies. This information shall be provided in respect of all Tenderers, whether applying individually or as a group together with Auditor's certification.
 - Financial statements must be audited by a certified chartered accountant.
 - Financial statements must be complete, including all notes to the financial statements.
 - Financial statements must correspond to accounting periods already completed and audited (no statements for partial periods will be accepted).
 - **Annexure 5A to be signed by the practicing chartered accountant.**
- Financial data of each year submitted in foreign currency shall be converted to equivalent INR at the TT Selling rate of exchange of 'State Bank of India' prevailing on 31st March / 31st December of the respective financial year.

Signature of the Tenderer



ANNEXURE – 7

FORM FOR SEEKING PRE-BID CLARIFICATION ON TENDER DOCUMENT

Name of the Tenderer:

Sl. No.	Section No.	Clause No.	Tender Condition	Tenderer's Queries
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

.....

SIGNATURE OF THE TENDERER



ANNEXURE-8

CERTIFICATE FOR COMPLIANCE OF RESTRICTIONS IN REGARD TO PROCUREMENT
FROM TENDERERS FROM COUNTRIES SHARING LAND BORDERS WITH INDIA

[On the Tenderer's letter head]

I/We M/s..... [Name of the Tenderer] herein after called "the Contractor",
have read the clause regarding restrictions on procurement from a tenderer of a country which
shares a land border with India (Restrictions in regard to procurement from the Tenderers from
countries sharing land borders with India and in this regard I/We certify that

(Please tick either (a) or (b) below as applicable and strike out the option which is not applicable)

a. I/We certify that I am not from such country:

☐

(or)

b. I/We am from such a country and have been registered with the Competent
Authority. I/We hereby certify that I/We fulfil all requirements in this regard
and eligible to be considered. Evidence of valid registration by
the Competent Authority is attached.

☐

Place:
Date:

Signature of the Tenderer

Name:
Designation:
Seal of the Company:
Phone:

Note: In case of JV/Consortium, same shall be provided by each member of the JV/Consortium.



SECTION-XI**INSTRUCTIONS FOR COMPLETING THE PRICING DOCUMENT**

1. The Tenderer shall fill in and complete the Bill of Quantities (Financial Package) online through Karnataka Public Procurement Portal (eProcurement portal) only and **no hardcopy of commercials should be attached or disclosed elsewhere.**
2. The Tenderer shall quote the Tender Premium (Above/Below/At par) on the Total Estimated Cost in the 'Pricing Document (Bill of Quantity)' given in the Karnataka Public Procurement Portal.
3. The total Tender price shall be inclusive of all applicable Taxes and duties under the applicable Acts but **exclusive of CGST & SGST.** BMRCL shall pay the applicable CGST & SGST as invoiced by the Contractor to BMRCL.
4. The Tenderer shall ascertain all applicable Taxes and Duties under the applicable Acts and shall be included in the quoted price.
5. The evaluation and comparison of Tenders shall be made accordingly by BMRCL. No claim will be entertained on this account after acceptance of the Tender or during the currency of the Contract.
6. **Income Tax (IT) deduction:** As per the prevailing rate, IT shall be deducted and remitted to the Income Tax authorities and Form 16 shall be furnished by BMRCL in proof of remittance to IT Department for availing lower deduction of Income Tax, necessary certificate for each financial year issued by the Income Tax Authority shall be furnished by the Contractor, failing which IT at the maximum rate will be deducted.
7. The Price quoted by the Tenderer shall be fixed for the duration of the Contract and shall not be subject to adjustment on any account.
8. Tender submitted with an adjustable price quotation will be treated as non-responsive and rejected, pursuant to ITT Clause 23.
9. The Tender Price shall be inclusive of all charges of insurance, transportation up to destination, handling, installation, royalties & any other charges leviable and payable by the Contractor under the Contract, or for any other cause and including Tax to be deducted at source and shall be included in the Total Tender Price.
10. The Contractor shall be entirely responsible for license fees and any other incidentals incurred until completion of the whole of the Works and handover to the Employer.
11. The Contractor shall maintain complete records of duties, other taxes and levies etc. payable to various authorities in relation to the Works and submit the receipts/records for verification as and when demanded in writing by the Employer.
12. Any increase in CGST & SGST shall not be paid in the extended period of Contract for which the Contractor alone is responsible for delay as determined by the Engineer while granting the Extension of Time. However, this shall not be applicable for "Variations".

